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Hearst Buys Stock Interest In Canada Power

At Same Time, Canada Power & Paper Corp. Acquires Substantial Interest In Dominion Newsprint Co., Ltd., Subsidiary Organizations Negotiating On Behalf of Hearst Newspapers for Acquisition of Water Power Rights and Timber Limits in Newfoundland Adequate for Requirements of Large Paper Mill

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 22, 1930.—Montreal has received via Newfoundland the news that the Canada Power and Paper Corporation of this city has concluded arrangements with the Hearst interests involving the acquisition by the Hearst organization of a stock interest in Canada Power, which in turn acquires a substantial interest in the Dominion Newsprint Company, Ltd., the subsidiary company which has been negotiating on behalf of the Hearst organization for the acquisition of water power rights and timber limits in Newfoundland adequate for the requirements of a large paper mill.

May Build News Print Plant on Gander River

This information was given out by Frank W. Clarke on his arrival in St. John's, Newfoundland, in company of R. G. and A. Reid, directors of the Reid Newfoundland Company. Mr. Clarke is vice-president of the Canada Power and Paper Corporation and of the Anglo-Canadian Pulp and Paper Mills, Ltd. The party went into conference with the Hon. Pasker Cook, acting Premier of Newfoundland, and Sir William Coaker, executive member, on the question of renewing negotiations for the establishment of a news print plant on the Gander River. This project, which fell through last year, involves the granting of large concessions of timber land in Laborador.

Union Involves Adoption of New Policy

Mr. Clarke stated that this union of interests involves the adoption by the Hearst organization of a policy in respect to their news print supply which is similar to that adopted by the *New York Times*, the *Chicago Tribune*, and the *New York Daily News*, and by the Rothermere interests in Great Britain, and that the Hearst interests will pay the market price for their paper, relying for protection of their future requirements upon their position as shareholders of the manufacturer which will in future furnish a large proportion of their requirements.

In Montreal the announcement is regarded as a constructive development for the news print industry and as a fine deal for Canada Power and Paper. The assumption is that Mr. Hearst will in future be a friendly ally of the industry rather than a combative customer, and that this will have a stabilizing influence on news print prices. Another assumption is that Canada Power and Paper will get all the Hearst business which has hitherto been scattered.

The news print trade generally is much interested in the development because in the past Hearst contracts for news print have been most disturbing, the break in news print a couple of years ago to around $55 per ton having been due to the search by this publisher for cheaper and still cheaper supplies. It is understood that the negotiations with the Hearst interests were directed by J. H. Gundy, who a few months ago took the presidency of Canada Power and Paper.

T. G. Taylor to Promote $3,000,000 Enterprise

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., September 20, 1930.—A report that Tom G. Taylor of Portland, may possibly be ready to promote some new industrial project allied with pulp and paper has been current in the northwest following Mr. Taylor's return from an extended trip to the east, middle west and south.

Upon his return he announced that he is promoting an industry for Portland or vicinity that will be capitalized at approximately $3,000,000 and that while he was gone he was in touch with capitalists ready to back such a proposition. The plant would employ 250 persons.

While, as stated, the reports are only street conjecture, the fact that Mr. Taylor helped finance the start of the Fir-Tex Insulating Board Company and the St. Helens Pulp and Paper Company, St. Helens, Ore., and the Shaffer Box Company of Tacoma, lends some justification to the rumors, which would connect the new plans with similar projects.

Mead Corp. Lists New Preferred Stock

DAYTON, Ohio, September 22, 1930—Listing of a new issue of preferred stock of the Mead Corporation has been approved by the trustees of the Cincinnati Stock Exchange. The New issue consists of 38,641 shares of series "A" no-par preferred, paying $6 a year. At the same time the old no-par common and old $100 par 7 per cent special preferred stocks were removed from the list, both issues having been exchanged for the new issues of the Mead Corporation.

The capitalization of the Mead Corporation consists of an authorized issue of 1,000,000 shares of no-par common, of which there is outstanding 354,731 shares; an authorized issue of 500,000 shares no-par preferred, of which there are 36,641 shares outstanding, and an authorized issue of first mortgage 6 per cent gold bonds series "A", of which there is outstanding $9,500,000.

Canadian Tariff Changes Affect Paper Industry

Dominion Paper Manufacturers Express Satisfaction With Changes and Anticipate Increasing Domestic Production and Reducing Importations—New Regulations Should Do Much to Prevent Dumping—Book Paper Mills Materially Aided.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 22, 1930.—At a special session of the Federal Parliament, called to take measures for the relief of unemployment, wholesale changes in the customs tariff were announced, the duties on the products of key industries being sharply raised and being put into force immediately. This will have widespread effect upon importations from all countries, and in particular from the United States. Premier Bennett stated that, at the most conservative estimate, they would result in giving employment almost immediately to between 25,000 and 30,000 workers, and in all probability to a far greater number when the full effects of the revision were being felt. It is hard to estimate the effect on imports of products manufactured from pulp and paper, but a recital of the changes immediately concerning them will show the trend.

Drawback on Periodicals Abolished

For some time past publishers of business and general magazines and farm papers have been granted a drawback on certain classes of paper that they require, and which has been imported from the United States. This drawback has been abolished, and the publishers contend it will work hardship on them. The argument is that Canadian fine paper mills are unable to supply certain classes of paper, or that such paper as is made in Canada is inferior in quality. Paper makers in Canada do not agree with this view, and have consistently opposed the drawback, on the ground that they are fully capable of meeting the needs of Canadian publishers.

The changes in the Tariff which affect the pulp and paper industry are as follows:

The three rates of duty given for each item are respectively, British Preferential, Intermediate, General. The British Preferential applies to goods imported from the United Kingdom or other parts of the British Empire. The Intermediate Tariff applies to Czecho-Slovakia, Finland, Holland and other countries. The French Treaty Rate which grants a discount of 10 per cent from the Intermediate Tariff applies also to Norway and Sweden. The General Tariff applies to the United States.

Changes in General Tariff

Item No. 192—Straw board, mill board and card board not pasted or coated, tarred paper, felt board, sand paper, glass or flint paper and emery paper or emery cloth, 15, 22½, 25 per cent, is changed to read: "Straw board, mill board, card board and boards manufactured from other vegetable fiber, not pasted or coated, tarred paper, felt board, sand paper, glass or flint paper and emery paper or emery cloth, 15, 22½, 25 per cent.

Item 193 "Paper Sacks or bags of all kinds, printed or not, 15, 25, 27½ per cent," is changed to read: "Paper Sacks or bags of all kinds, printed or not, 25, 30, 35 per cent."

Wrapping paper which formerly came under Item 197 Paper of all Kinds, n.o.p. dutiable at 15, 22½, 25 per cent, now has a separate item: "Wrapping paper of all Kinds not pasted, coated or embossed, 20, 30, 35 per cent." Norway, Sweden, Finland, Holland and Czecho-Slovakia are granted Intermediate rates under the former tariff and presumably this still holds good.

Paper Containers previously came in under Item 199, "Papeteries, envelopes and all manufactures of paper, n.o.p. 22½, 32½, 35 per cent. Now a new item is given: "Paper Containers of all kinds, fiber or corrugated, per pound, 1 cent, 1¼ cents, 1½ cents."

Item 1060 which gave a drawback of 80 per cent of the duty on paper imported for printing magazines, farm journals, etc., has been abolished.

The item covering advertising matter, pamphlets, advertising periodicals, etc., subject to a duty of 10, 12½ and 15 cents per lb. remains as it was but certain provisos are added which will have the effect of increasing the duties. These provisos are as follows:

(1) Provided that when imported under the general tariff, the rate of duty shall not be less than 35 per cent.

(2) Provided that on goods specified in Item 178 (the item covering this classification) and imported by mail on and after the first day of July, 1914, duties may be paid by customs revenue stamps under regulations by the Minister, at the rates specified in said item, except that on each separate package weighing not more than one ounce the duty shall be each, 1 cent, 1 cent, 1 cent.

(3) Provided further than on and after the first day of October, 1930, the duty under this item shall be each, 2 cents, 2 cents, 2 cents.

Artificial Silk

Indirectly affecting the industry are other items. An important subsidiary branch of the pulp and paper industry has to do with the manufacture of artificial silk, and in connection with the latter important revisions of the tariff have taken place. On rovings, yarns and warps wholly of synthetic fibers, not more advanced than singles the former duty was 12½, 17½ and 20 cents per pound. This has been altered to 25 per cent, 30 per cent, and 35 per cent, with a provision that the duty shall not be less than 28 cents per pound under all three tariffs. For rovings, yarns and warps of synthetic fiber, including threads, cords and twists, the duty is now 25 per cent, 30 per cent and 35 per cent, not to be less per pound than 28 cents for all tariffs, as against the former duty of 17½, 22½, and 25 per cent.

On woven fabrics, wholly or in part of synthetic fibers, not to contain wool, there is a sharp increase. The former duty was 17½, 32½, and 35 per cent; it is now 27½, 40, and 45 per cent, and in addition, 30 cents, 40 cents, and 40 cents per pound.

How Canadian Manufacturers View the New Rates

The following statement from Edward Beck, general manager of the Canadian Pulp and Paper Association, shows how the tariff changes as affecting the industry are viewed here:

"The feeling amongst the paper manufacturers over the changes in the tariff, in so far as they affect this particular industry, is one of considerable satisfaction. All the changes are of a helpful and constructive character and should result in increasing domestic production and reducing importations.

"Perhaps the most helpful change is that with respect to the application of the anti-dumping regulations. The paper industry, on account of its many ramifications, has probably suffered more severely than any other by 'dumped' imports as well as by reason of importations being brought in under valued or wrongly classified. This evil has been so great in the past that the Canadian Pulp and Paper Association felt obliged to employ its own expert to try to combat it and has had some success in that direction. It is felt that under the new regulations and the increase in the penalty for importers caught violating the Act there will be less disposition on their part to evade payment of the proper rate of duty.

"The elimination of Section 1060 of the old act, which provided for a rebate of 80 per cent of the duty on paper imported by publishers of farm journals and magazines, is also regarded as a

step in the right direction. Book paper manufacturers opposed the adoption of this item in the first place as unwarranted and unfair and their experience of the two years while it was in effect was sufficient to justify their objections. Everybody who knows anything about the book paper industry knows how impossible it is for Canadian manufacturers to compete with American on anything like even terms. Under the drawback many tons of book paper were imported into Canada each year. With the drawback abolished it is to be expected that the bulk of this business will return to Canada.

"The establishment of a separate item to cover wrapping papers of all kinds not pasted, coated or embossed, will also be of help to the industry, the general tariff being fixed at 35 per cent. As is generally known the development of the kraft industry in the Southern States through the utilization of yellow pipe and cheap Southern labor has well-nigh demoralized the wrapping paper industry both in the Northern States and in this country. Kraft paper of this description has during the past few months been offered to Canadian buyers at less than the cost of production in this country. The new tariff should give Canadian manufacturers a better opportunity of holding their own market.

"The same can be said of the increase in the tariff on paper sacks and bags of all kinds. The change in the duty on paper containers, from 22½, 32½, and 35 per cent to 1, 1¼, and 1½ cents a pound may not work out advantageously for all container manufacturers but is expected to do so in numerous instances.

"Another change that will help the paper industry is that increasing the duty on advertising matter, pamphlets, advertising periodicals, etc. This change, while intended to benefit specifically the printing and publishing industries, will indirectly benefit the paper industry as well, since anything that tends to increase the consumption of paper in Canada must inure to the advantage of the paper trade.

"Altogether it is felt that the paper industry did not fare too badly in the tariff changes and that good results may confidently be expected. It is to be noted that the increased protection afforded does not mean that paper consumers will eventually get cheaper paper. The paper industry depends so much upon constant and full employment for its success that anything tending to that end must in the end benefit all concerned."

B. C. Turning to Paper Production

The depression which for years has been prevalent in the British Columbia lumber industry is reported to be bringing home to the lumber operators the conviction that their day is passing, and that they must either turn to new methods and channels of production or go out of business.

This explains the steady rise of the pulp and paper industry on the Pacific Coast, the introduction of by-products, and experiments in the utilization of waste. It is pointed out that companies such as the Powell River Company, which now employs 1500 men, are financing university experiments to determine the possibilities of increasing the use of hemlock in the manufacture of news print and where the British Columbia Pulp and Paper Company is launching a project to utilize the tops of trees and other parts of the tree previously wasted in pulping processes.

Some authorities contend that the time is not far off when pulp mills and wood conversion plants will be integral parts of most of the large sawmills. Combination lumber and wood conversion units provide a logical system of production. Logs can be cut without wastage, and high grade material can be marketed as lumber while the conversion units will produce new and widely marketable products from waste or from low grade lumber now sold at a loss or in competition with the upper grades.

A far-seeing coast lumberman remarked the other day: "While we all know the original stand of timber was composed of the finest trees that the world ever saw or will ever see again, the tremendous wastage involved in the harvesting of this crop and its crude manufacturing methods and utilization prevented the country from deriving the maximum benefit of this great resource. There will be more money made from the second and third crops of timber in this country than was derived from the original stand."

By-Products from Wood Pulp

In Eastern Canada the difficulties experienced by news print manufacturers is resulting in much study and experimentation in the production of by-products from wood pulp. High-grade insulating board products, developed from previously considered "waste material," are now profitable side lines for several news print manufacturers. Paper alpha, another specialty, is a bleached pulp used in the highest grades of white paper. The main distinguishing feature of this product is its great permanence. It is also used in the manufacture of "onco" artificial leather used in the soles and the uppers of shoes, leather belting, and in the manufacture of shatter proof glass.

Cellate, a bleached fiber having exceptionally high strength and tear, a discovery of chemical research on pulp, is used in the manufacture of high grade white papers, flour, coffee and other food product bags and in the manufacture of string. Stock which is to be made into special products is divided after the centrifugal screens are passed over rifflers into a special fiber plant, where it is given various treatments according to the product it is desired to produce. Another product is duracel, an exceptionally strong semi-bleached pulp used in manufacturing sand paper, tags, bags, cable insulation, fiber string and pleating papers. Silk alpha is another product used in rayon artificial silk.

Such products as turpentine, wrapping paper, twisted paper string for furniture, envelopes, bags, towels, waxed papers and special fibers find ready and profitable markets.

New Power Line Completed

The second 230 mile transmission line to Toronto from the Paugan, Quebec, hydro-electric plant of Gatineau Power Company, a subsidiary of Canadian Hydro-Electric Corporation, Ltd., itself a subsidiary of the International Paper Company, has been placed in commercial service. The new line is a 220,000 volt steel tower aluminum line, a duplicate of the first one, and is being used in conjunction with it for the delivery of power under contract to the Hydro-Electric Power Commission of Ontario.

Champion Coated Paper Co. Files Answer

DAYTON, Ohio, September 22, 1930—The Champion Coated Paper Company of Hamilton has filed an answer to the Government's charge of alleged non-payment of $88,000 in back income taxes. In its petition the Hamilton concern says that a return of embezzled funds is not taxable income. This petition was filed the past week with the United States Board of Tax Appeals.

The petition recites how $50,000 was embezzled from the paper company by a paymaster drawing checks to fictitious workmen, forging the signatures and cashing them. The fraudulent work began in 1914 and continued until 1926 when it was finally detected.

The Champion Coated Paper Company recovered $29,000 from surety bonds and property of the embezzler. During all the years of the embezzlement, the company deducted the amount of the frauds from its income tax return as operating expenses. Now the Government seeks to tax the $29,000, which the company recovered but the Hamilton firm contends it is too late.

Another point in its appeal is the alleged failure of the Government to allow a reduction of $5,500 attorney fees in connection with the floating of the $2,750,000 sinking fund. The company contends that this is legitimate operating expense, and as such, should be allowed as a deduction.

Depreciation caused by the work of the Miami Conservancy District is another deduction claimed in the petition.

The Champion Coated Paper Company claimed its property decreased $37,000 in value by reason of this work.

These and other deductions amounting to a total of $85,000 will be passed upon by the Board of Tax Appeals when it takes up the petition of the company.

New Transcello Paper Mill To Start Operation

Located In Milwaukee, Latest Wisconsin Specialty Plant Will Manufacture Transparent Paper to Compete With Glassine and Cellophane—Specially Designed Machinery Is Installed—Output of 5,000 lbs. Daily Assured At Present

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., September 22, 1930.—Wisconsin is adding another specialty plant, with the announcement of the Transcello Paper Company that operations would be started within a week. The plant is located in Milwaukee, where there is now a market for a large amount of transparent paper.

No inkling was given the trade or the public that the company was organized or the plant being established until everything was ready for the start of business. Research and experimentation have been going on for two years to develop a transparent paper to compete with glassine and cellophane. The new product, to be trade-marked "Transcello" is expected to create a national demand because of a price midway between the other two.

Quarters have been taken up by the company in a building at 710 West Virginia street, Milwaukee, where a warehouse of the Pfister & Vogel Company was formerly located. The concern has 7,000 feet of floor space to start with. Specially designed machinery representing an investment of $15,000 was built by Milwaukee concerns. The output will be 5,000 pounds daily for the present. Canadian patents have been secured on the processes for making the paper, and United States patents on the process and formula have been applied for.

Capitalization of the firm consists of 10,000 shares of common stock at $10 a share, making a total of $100,000. All of the stock is privately owned. Officers are: President and general manager, J. E. Kiefer; vice president, John Orlebeke; secretary-treasurer, Charles D. Rones. Mrs. Nettie Karsten is also a director of the firm.

Important Water Power Decision

What is considered the most important water power decision in history has been handed down by the Wisconsin Railroad Commission with reference to claims made by the Flambeau Paper Company, Park Falls, Wis. The commission holds that the energy which resides in falling water is not a property right appurtenant to the riparian lands, but belongs to the state.

This means that power companies, which under the water power law of the state must turn over their power plants to the state after thirty years of operation, if the state wishes to take advantage of the recapture law, cannot charge the state excessive sums for the so-called "value of energy." The decision will not affect rates, because the "value of energy" is not included in rate basing valuations.

The Flambeau Paper Company sought a permit to build a dam, through its subsidiary, the Flambeau Power Company, across the north fork of the Flambeau River near Park Falls. Power was to be furnished the paper mill from this source. Under the water power law, the railroad commission must decide whether such permits shall be granted and what valuation shall be set upon the property. It is this sum set at the time the permit is granted, plus the value of the physical structures less depreciation, that the state must pay the power company when the recapture clause goes into effect thirty years after the permit is granted.

Attorneys for the power company asked that the value of the rights be set at $151,850. As only $67,748 was fixed for value of flowage lands, rights and the dam site, it was evident that the company estimated that the energy should be valued at $84,100, which amount the state would have to pay. The commission, in its opinion, grants the permit but sets the valuation at only $26,000.

The opinion says in part: "The railroad commission has taken the position that since the owner of a dam site and flowage rights on a navigable stream may not convert the energy of the stream to his own use without obtaining a permit from the state to do so, that therefore he has no property right in the mere energy of falling water. It is unthinkable that a man may have a property right in something he has not the legal right to reduce to his possession."

It is expected that the Flambeau Paper Company will carry the case to the state and federal courts.

News of the Industry

Stock held by the Whiting-Plover Paper Company and E. A. Oberweiser, president of the paper company, in the Hotel Whiting at Stevens Point, Wis., has been sold to the Mid-West Hotel Company. The transaction included 320 shares. The hotel, one of the finest in central Wisconsin, was founded through the generosity of the late George A. Whiting. His recent death led to the retirement of the paper company and Mr. Oberweiser from active connection. Mr. Oberweiser was president of the Stevens Point Hotel Company, owners, and has resigned from the board of directors.

All but 764 cords of the Consolidated Water Power and Paper Company's log raft that was beached on Stockton Island, Lake Superior, about a week ago was saved. Tugs are attempting to salvage whatever can be found along the shores.

The raft contained 17,674 cords of pulpwood and was being conveyed across Lake Superior to Ashland, Wis. by two tugs of the Newaygo Tug Lines, Inc. It was the largest raft ever floated across the lake, and was caught in a miniature cyclone that took it out of control of the boats and dashed it onto the beach. A large crew of lumberjacks was rushed over from Ashland, and their work and that of the tugs kept the raft from breaking up until the storm abated and the booms could be fastened again. The raft was towed safely into Ashland with only the small loss noted. Although there was a loss of wood, some expense will be saved the company because the entire shipment was stripped of its bark during the encounter.

Squads of men from the Nekoosa-Edwards Paper Company, Nekoosa, Wis., were kept busy last week fighting marsh fires which endangered their timber preserves. The fires were finally brought under control before any damage was done. A fire also started in the company's wood yard and consumed several cords of pulp wood before it could be extinguished. A bucket brigade kept it from spreading until the fire department arrived.

Mills at the Consolidated Water Power and Paper Company at Appleton and Biron, Wis., are still going strong on their safety records. The Appleton mill has not had a lost time accident since February 16 and the mill at Biron since January 22. This record exceeds by a long period any previously known to the company and the employes are trying hard to keep up this favorable situation.

The Hewitt Machine Company has started construction of an addition to its machine shops at Neenah, Wis. The new unit will be one story, of brick and steel, and will add considerable floor space. A new roll grinder much larger than the former one is to be installed, together with other modern equipment.

D. W. Bergstrom, Jr., vice-president of the Bergstrom Paper Company, Neenah, Wis., is the champion of the Neenah-Menasha Golf Club, having defeated George Gilbert, vice-president of the Gilbert Paper Company in the finals 4 and 3 in 36 holes. This is the second time Mr. Bergstrom has been club champion.

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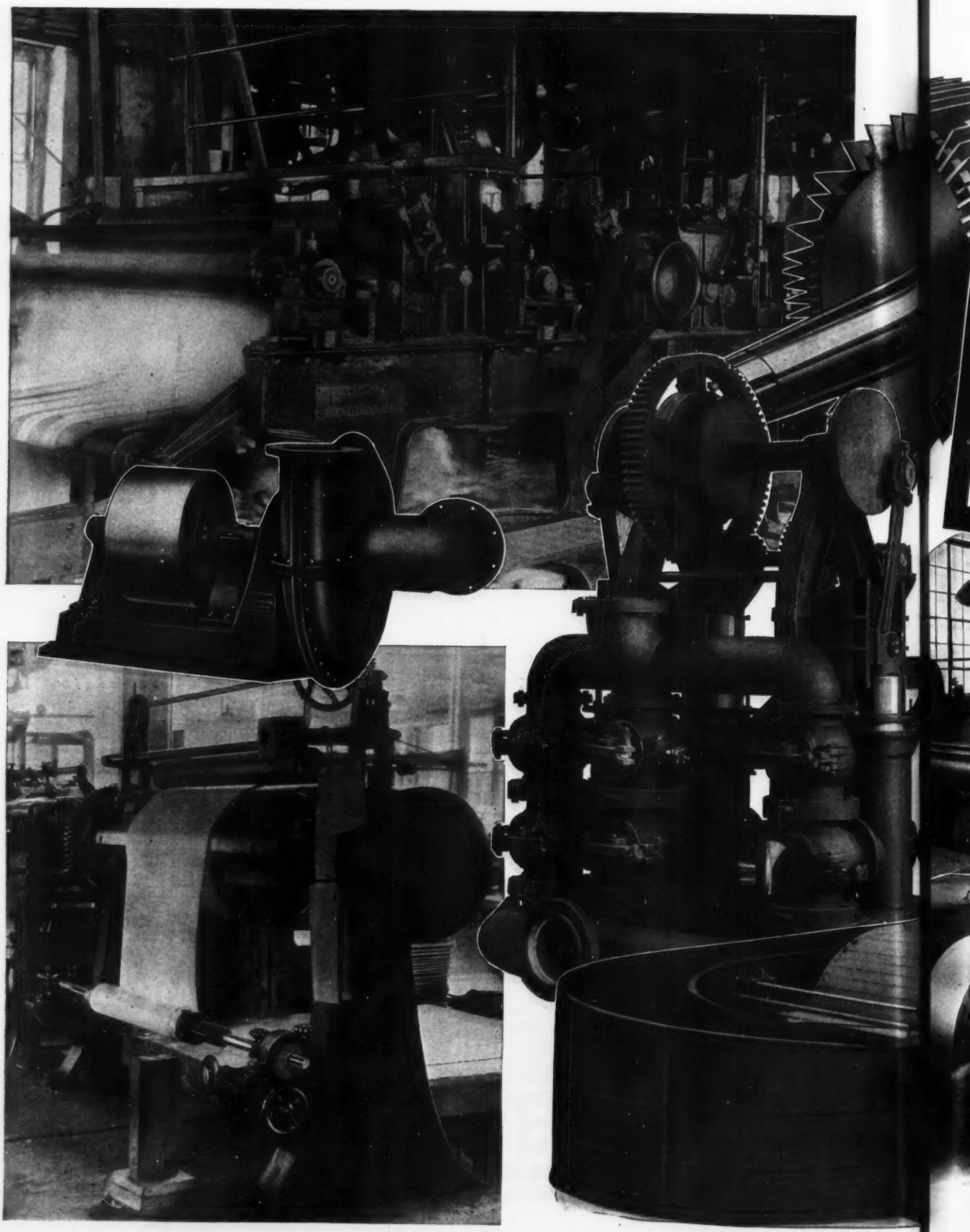

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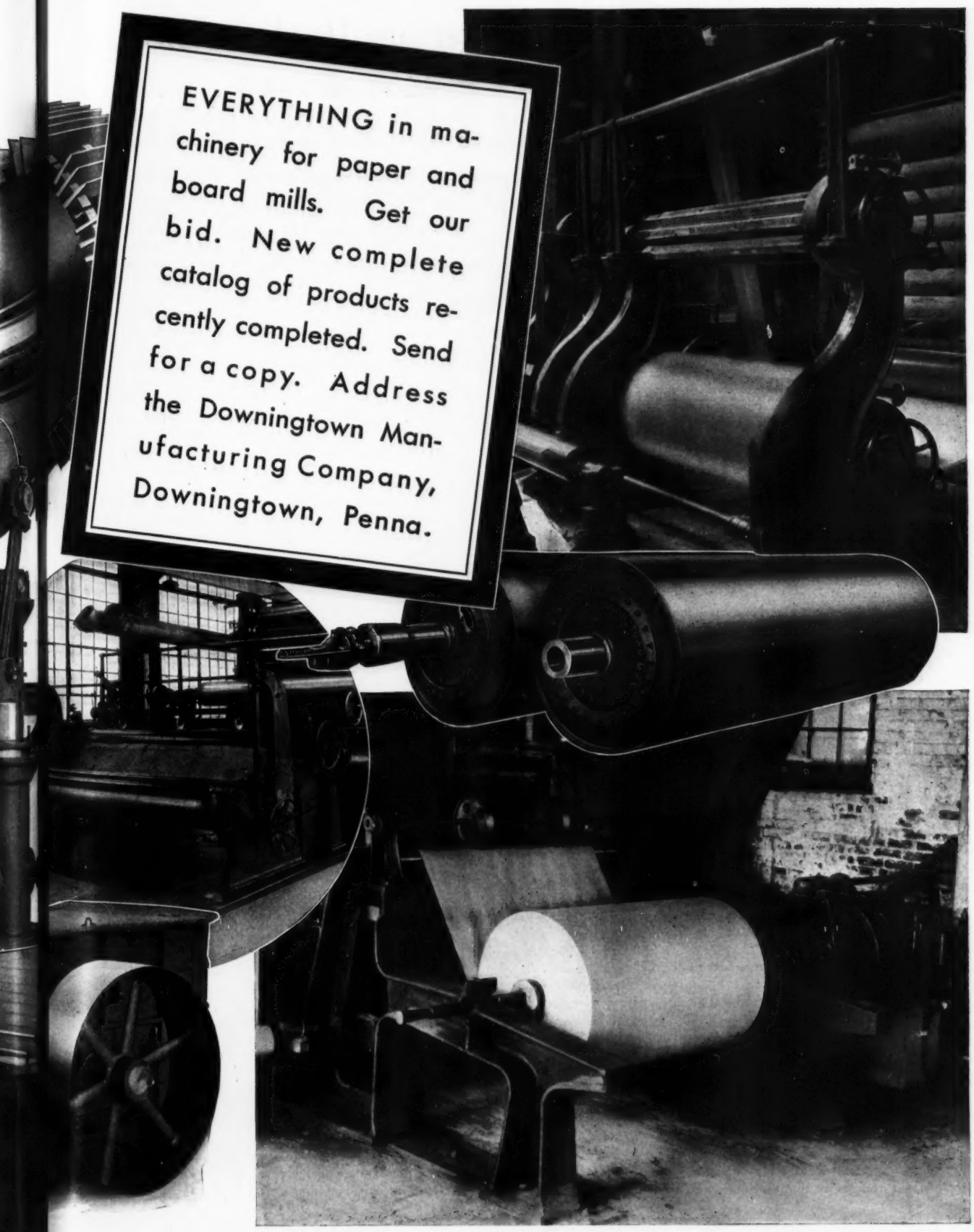

Paper Business Improving Slightly In Chicago

Fine Paper Section Picking Up, Following Seasonal Summer Slackness—Distributors Assured of Steady Market and Are Endeavoring to Speed Up Buying—News Print Price Situation Practically Unchanged, Although Demand Is Increasing

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., September 22, 1930—Business in Chicago has shown steady improvement since Labor Day and the termination of the vacation season. Consumer buying is reported to be increasing in volume. The fine paper market seems to be one of the first to pick up from the summer doldrums and now, assured of a stable market, jobbers are using every sales effort to speed up buying. No change is reported in news print prices for 1931. The expectations are that prices will either remain as they are or swing slightly upward. News print demand is improving along with the slow progress noted in business development.

Chicago Salesmen's Golf Program Ends

The summer golf tournaments of the Chicago Division of the Salesmens Association of the Paper Industry are over. They are still counting the results of the big wind-up held on September 18 at the Wilmette Country Club and the counting is going on in earnest in an effort to find the winner of this years leg of the Harbison Trophy. Otherwise, all winners have been announced, the last song has been sung and golf clubs—at least for competitive golf—have been packed away. It might be well to say that Frank Prentiss, of Hollingworth & Whitney, deserves a lot of credit as chairman of the golf committee. All monthly events have been well attended and on September 18 over sixty golfers wound up the season in great style. Sandwiched in between a snappy luncheon and an enjoyable dinner was a lot of golf—some good and some bad. Here are the prize winners: Low gross, Bill Tilden, Eastern Manufacturing Company; Low net, A. N. Redfield, Munising Paper Company; Low net, first 9, Creighton Whiting, American Writing Paper; Low net, second 9, Ray Russell, Marathon Paper Company; Lowest putts, J. G. Hillyer, Whitaker Paper; Lowest score on the water hole, Charles Roos, National Envelope; Blind Bogey, Mr. Zerringer of Messenger Paper Company and the Vice Presidents trophy, Ed. Beimfohr, Crocker-McElwain. The low net foresome was composed of Harold Knott, of Eastern; Phil Howard, American Paper Merchant; Frank Tash, of Tash Advertising and Tom Donahue of Regal Paper. The high net foresome was composed of Jim Coy and Guy Waldo of Flambeau, Henry Law of Dwight Brothers and Charles Brown of Bradner-Smith. Joe Daly of American Writing took the high score honors.

Paperboard Officials Confer

Next week will be a busy one for members of the Paperboard Industries Association and especially for those who are located in Chicago and will act as hosts to the regular meeting of that association scheduled for the Drake Hotel, September 23, 24 and 25. Unusual interest will be attached to the meeting because of the fact that each of the three P.I.A. groups will appoint two members to serve on the Presidential Nominating Committee which will nominate a president to be elected at the November annual meeting in New York city. According to advice from the offices of the Association at 608 South Dearborn street, Chicago, a good attendance is expected.

Paper Merchants to Hold Fall Meeting

A great deal of attention is being paid to the details of the Fall meeting of the National Paper Trade Association which will be held in Chicago the week of October 6 at the Stevens Hotel. Affiliated organizations are also making preparations to take an active part in an event that assumes unusual importance because of present and future business conditions. The Middle States Wrapping Paper Association, of which Leo Altholz, of Inlander-Steindler, Chicago, is president, will hold a meeting during the week, as will the Salesmen's Association of the Paper Industry, according to D. F. Crocker, secretary. Bishop George Craig Stewart, chaplain of the association, will deliver the address at the noon meeting on Tuesday, October 7. He will discuss European conditions.

"Selling Color with Color" is the title of Westvaco Inspirations for Printers, Number 57, which makes its appearance this week. This issue of the West Virginia Pulp and Paper Company's interesting publication, is filled with many beautiful examples of color uses. It contains a number of lessons on the progress of color photography, "wood cuts in the books of France," "Attention Value that Sells" and a fine treatment of the subject covering unusual product demanding unusual settings. The cover of this issue of Westvaco features 39 varied shades and colors that make the book unusually inviting to the modern artist and printer.

Bishop George Craig Stewart, chaplain of the Salesmen's Association of the paper industry and speaker at the coming annual meeting of the association on October 7 returned on September 17 from a three months visit to Europe. His experiences in Europe and his study of European conditions will form a part of his discussion at the Salesmen's meeting when he will talk on "Business Conditions in Europe." Bishop Stewart was the youngest American bishop to sit among the 300 prelates in point of consecration.

Consolidated Wood Room Nearly Completed

Machinery is all in place for the new wood room of the Consolidated Water Power and Paper Company's mill at Biron, Wis. The machinery is being used in the open until the old wood room can be dismantled, after which a new one will be built to house the present machinery. The capacity is now twenty cards per hour on the barkers. The new installation consists of large drum type barkers, winter and summer slashers, submerging conveyor, and numerous conveyors for carrying the pulp wood from point to point. The submerging conveyor will operate in a hot pond, giving the same softening facilities on bark in winter as afforded by the river in summer. In addition to the new wood room there will be a new size plant, new deckers, a revamping of the decker-ing system, and changes in the white water layout. The building will be completed about November 1.

Finnish Pulp and Paper Markets Quiet

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 24, 1930.—The usual summer dullness has been experienced in the Finnish pulp and paper markets, this year, according to Consul James R. Wilkinson, at Helsingfors.

Sales of news print for 1931 delivery have been going forward but the thin print, wrapping, and fine paper markets have been extremely quiet. No sign of improvement has yet become apparent in the chemical pulp market. Contracts have been closed for shipments of all qualities but at prices leaving little or no profit for the producers. Even contracts for 1932 delivery have been entered at prices so low that the mills contemplate closing down, awaiting better market conditions.

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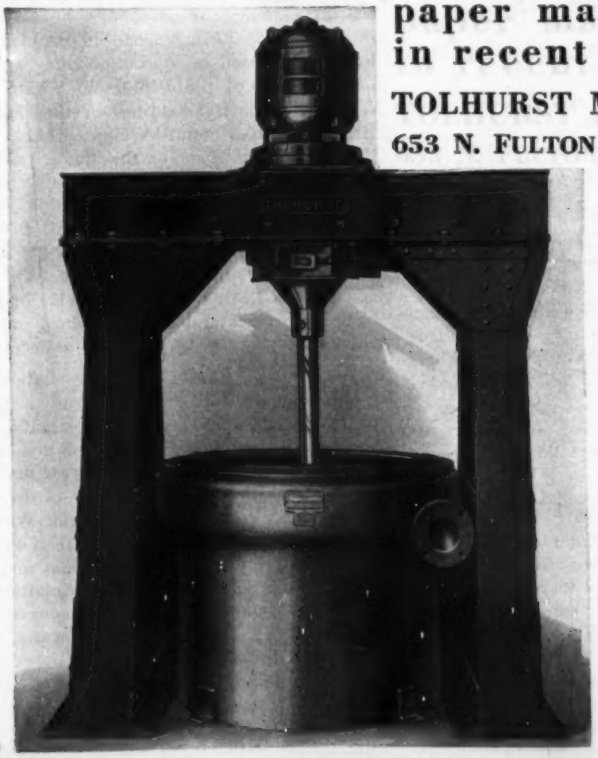


TOLHURST MACHINE WORKS INC.
653 N. FULTON STREET, TROY, NEW YORK

DESIGNED AND BUILT BY CENTRIFUGAL SPECIALISTS

Tolhurst Paper Centrifugals are manufactured under license from the Centrifugal Engineering & Patents Corp., owners of the Erkensator patents.

TOLHURST
REGISTERED U.S. PAT. OFF.
Centrifugals

4329

Paper Demand Slowly Improving in Philadelphia

Despite Return of Warm Weather, Most of Various Standard Grades of Paper Are In Better Request Than of Late—Competitive Bidding For Orders Is Keen In Wrapping Paper Section—Paper Mills Planning Expansion of Operations

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., September 22, 1930.—Though the paper markets in the Philadelphia territory continue to show signs of revived interest the upward climb is slow and more spotty than it was a few weeks back, when improvement began. However this phase of the market is more encouraging and dealers look for real interest on the part of the consumers when the present hot weather has passed. The returning warm weather may have retarded buying, as manufacturers of clothing and cold weather products hold off operations pending a more definite assurance of buying for Fall stocking which temporarily has been suspended or taken a hand to mouth trend in cautiousness.

There is business to be had by the go-getter in the present day paper situation but the competitive bidding for orders is the keener for the lagging of Fall business. This is particularly true in the wrapping paper lines and for the converted products such as bags and corrugated containers and cartons used for packing purposes. Specialties are steadier and in a few lines of specialty papers there has been a really profitable business conducted throughout the warm days of the summer owing to the unprecedented demand created by the torrid weather. This applies to parchment papers, waxed products, and grease proof papers. Converters of cellophane and their combinations with papers have enjoyed an unusually good year to date and look for even better times in that branch of the industry as the Fall buying gets under way. The growing use of cellophane has created a new marketing product for the paper dealers who are on the alert for such opportunities in new consuming markets. There has been marked progress made in the trade among the cigar manufacturers of the city and among the baking and food product manufacturers in the use of cellophane with newer markets opening up in the mercantile field where a visible wrap is desired. While the use of cellophane grows the DuPont company, which just now is the chief source of supply in the manufacture of this product has brought to the attention of the consumer the new low prices that will prevail with the first day of October.

Volume of Paper Contracts Fair

Though there is lacking the greater volume of paper contracts that prevailed at this time last year there is a fair amount of buying for long term supplies or for the remainder of the year. Wholesalers of paper report that large printers and publishers are again buying many grades of papers that were more or less dormant throughout the summer when a more cautious attitude was taken. Now that the large consumers of paper in this allied industry have dispelled the uncertainty that took place with the announcement of the dollar book, buying from such patrons is broadening and bulk papers, coated and unfinished grades, are all in greater demand. Mill representatives report more confidence on the part of the distributors in placing orders but still cautiousness in buying only for the needs of the immediate future.

Mills in the Philadelphia territory are planning expansion of operations, with the improved market commanding broader shipments. There is, like in other branches of the trade, smaller volume of business at this time over the same period of last year but with returning confidence demands increase over the early weeks of the month. Manufacturers are now operating on from five to six days per week, with the former the more general schedule of working. The board market continues to be slow in picking up, with boards at the low levels for the post war years. Specialty manufacturers and those mills featuring fancy finishes in writing papers and certain grades of book papers used by government and large corporations, better lines of writing papers and bonds, all have a fair amount of orders that require broadening of schedules in production.

Like the demand in the manufacturing branch of the local industry there is broader shipments of high grade paper stocks and rags to the mills. As conditions improve mills require larger volume of stocks and available supplies are soon exhausted owing to the restricted warehouse supplies of the better grades of these materials. Prices on all grades of paper stocks have been advanced within the fortnight.

Wholesale Waste Merchants Open Fall Sessions

With the returning vacationists settling down to business promotion and stimulation of demand, there is revival of trade meetings and organized bodies of the various branches of the industry have again turned to problems of business in open forum discussion or in routine trade association sessions. The first meeting of the Wholesale Waste Merchants Association of Philadelphia was held last Wednesday at the Hotel Lorraine, Broad and Fairmount Avenue, when 25 concerns engaged in the various divisions of the waste trade gathered around the banquet board and reviewed routine association matters and discussed conditions, which were more encouraging than a few months back. Thomas A. Kenny, head of the International Trading Company, presided, and greeted his fellows for the initial Fall gathering. Secretary William J. McGarity, Sr., head of the Penn Paper and Stock Company, reported on association activities and then all joined in the dinner served after an open forum on trade topics and conditions.

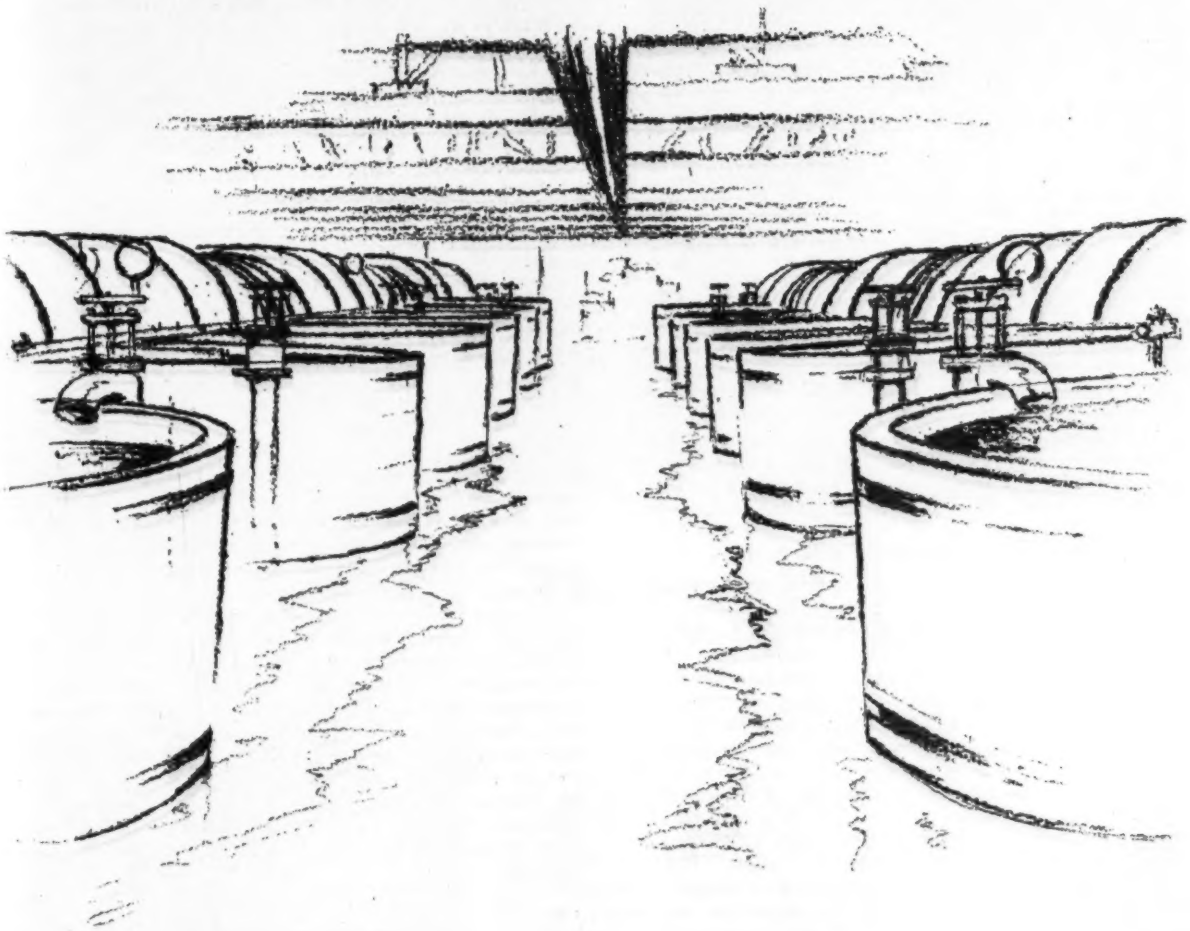
Paper Trade Association Meets

Opening its Fall sessions with a Quarterly Meeting the Philadelphia Paper Trade Association joined in the September gathering at the Down Town Club and there heard plans for the coming activities of the current year and instructed delegates to the coming Chicago Convention of the National body. President W. S. Wilcox, of the Wilcox Walter Furlong Company, greeted his trade brethern and then turned the meeting over to the matter of organized activities and on behalf of his associates instructed the delegates in matters to be laid before the National assembly in the coming convention. T. H. B. Smythe, head of the J. L. N. Smythe Company, was instructed as delegate from the Wrapping Paper Division, while President Wilcox will substitute for Norbert A. Considine, who is delegate to the Fine Paper Division, and who will be unable to attend. Owing to lack of definite information on the twine situation, that factor of the trade bodies activities was tabled until indications show that there is interest among the twine houses towards the association of its dealers with the organized paper distributors and its affiliation as a division of that body as planned in the springtime resolution adopted by the group of paper men associated with the Philadelphia Paper Trade Association. Following the transaction of the more important matter there was a routine report which followed the noontime luncheon.

Eastern Paper Co. Postpones Removal

Owing to the pressing business needs of the current season, the Eastern Paper Company, now located at Front and Brown streets, will be obliged to postpone removal to its new quarters

LET EMERSON MODERNIZE YOUR BEATER ROOM



One mill cut its beater room cost per ton 50% by using Emerson high density, high speed beaters . . . another mill regularly overloads its Emerson high density, high speed beaters 30-40% without trouble . . . a new 60 ton kraft mill completely equipped its beater room with 12 Emerson beaters to insure low production costs . . . similar economies are obtained in many other mills using Emerson beaters. If you are planning to replace old equipment or add new, get the facts about Emerson beaters first.

The EMERSON MANUFACTURING COMPANY
Lawrence, - - - Massachusetts
Division of John W. Bolton & Sons, Inc.

3995

in the Terminal Commerce Building, at Broad and Callowhill streets. The firm, which makes a speciality of volume school supplies and flat and converted paper products for educational purposes, is now at the height of its seasonal activity and cannot conveniently transfer its stocks at this time owing to demands of the early school term. Removal will be delayed until the month of December when the Eastern Paper Company takes possession of the 4th floor quarters of the new building which will house several paper concerns of prominence in the unique structure built to combine sales, executive, shipping and warehousing facilities under a single roof and with a mammoth shipping platform providing space for several hundred autos and delivery trucks with two direct railroad connections and central city quarters within a few squares of City Hall and the important business and shopping centers. The proprietors of the Eastern Paper Company, Charles J. Bartlett and Leslie C. Bartlett, will then make headquarters at the new address with converting plant and all combined under a single roof and on a single floor.

Fire Destroys Flannery Paper Stock Warehouse

Fire which last week broke out in the warehouses of the Flannery Brothers at 615-617 Cherry street, destroyed the entire building and the contents of paper stocks in which the firm dealt as wholesalers. Several thousand dollars worth of paper stocks were destroyed when the flames spread through the structure at rapid pace. The business is one of the oldest of its kind in the industry and for years was owned by the late Thomas Lynch. About a year ago the business was taken over by the Flannery interests, James E. and Leo Flannery, the former at one time manager for the Lynch heirs. Origin of the fire is not known but is believed to be due to spontaneous combustion.

Huff Paper Co. Settled in New Quarters

The Huff Paper Company, which on September 1 began removal to its new location in the Terminal Warehouse Building at Delaware avenue and Spring Garden street, is now completely settled in its new location which combines the executive, sales, and warehousing facilities. In the new location the firm announces that speedier services will be provided owing to the combination of the sales and warehouses which eliminates loss of time in the handling of orders through the maintenance of separate quarters in different parts of the city. The firm is one of the largest and best known of wrapping paper dealers, and specialty and bag houses in the city, and for a long period of years was established in offices in the Denckla Building. With the combining of the sales and warehouses on the third floor of the Terminal Warehouse the Denckla Building quarters have been abandoned and executives offices removed to the new home.

Begin Dismantling of Moorehouse Mills

With the sale of the old Moorehouse Paper Mills, located for more than fifty years in the Holmesburg district of Philadelphia, dismantling of the units will begin. The mills will be closed within the next two years, as the firm has that length of time in which to effect disposal of its units and stocks on hand before turning the plant over to the new owners, the Charles Linnig Company. The R. T. Moorehouse Company is equipped to manufacture news print, book papers, printing papers and ticket stocks.

Schwartz & Co. Add Flat Papers

Schwartz & Co., 151 North 3rd street, dealers in wrapping paper and specialities in coarse grades, have added a line of flat papers, including bonds and manifold papers, grades of papers used by stationers, gummed tapes and such other products as second sheets and carbon papers. The firm provided for the expansion of its lines with removal to the larger building at the present address a year ago. In the five story structure there is ample space for the fine paper division into which the business has expanded.

Settlement of the Royal Kendig Company, in the new offices on the sixth floor of the Terminal Commercial Building, Broad and Callowhill streets, is announced to patrons of the firm. The Royal Kendig Company, of which H. Evert Kendig is head, specializes in safety-check papers manufactured by George La Monte & Son, New York and has been located in the 7th and Chestnut street section for more than 25 years.

Hampden Glazed Paper & Card Co.'s New Lines

A complete line of entirely new designs in Christmas papers and grades of glazed cards for the coming holidays has been placed on the market here by the Hampden Glazed Paper and Card Company, with mills in Holyoke, Mass. and Quaker City offices in the Bourse Building, under management of J. A. Stuckey. The new line comprises such products as multicolored papers in shades that are appropriate for the Christmas season, and velvet prints of Yuletime designs.

Paper Salesmen's Fall Luncheon Date Changed

The Chicago Division of the Salesmen's Association of the Paper Industry has found it necessary to change the date of the Annual Fall Luncheon of the association from Tuesday, October 7, to Monday, October 6, at 12:30 p.m. The luncheon will be held in the Stevens Hotel in Chicago as originally planned.

This change in the date of the luncheon has been made necessary by a conflict of engagements on the part of Bishop George Craig Stewart, who is to be the speaker. The officers and Committee on Arrangements of the Chicago Division felt that there was so much desire to hear Bishop Stewart that rather than attempt to hold the luncheon on Tuesday, as originally planned, but with another speaker, it would be preferable to change the date to Monday so that everyone would have an opportunity to hear Bishop Stewart.

As previously announced, Bishop Stewart's topic will be "European Conditions Versus American Conditions." Bishop Stewart is a close student of world affairs and is particularly well equipped to speak on this topic at the present time since he attended the Lambeth Conference in England this summer and following that traveled in England and on the Continent. His wide acquaintanceship abroad makes it certain that Bishop Stewart will have many interesting sidelights to present, and the Chicago Division feels sure that every member of the Salesmen's Association who is in Cihcago on October 6 will want to hear Bishop Stewart and bring one or more guests to hear him.

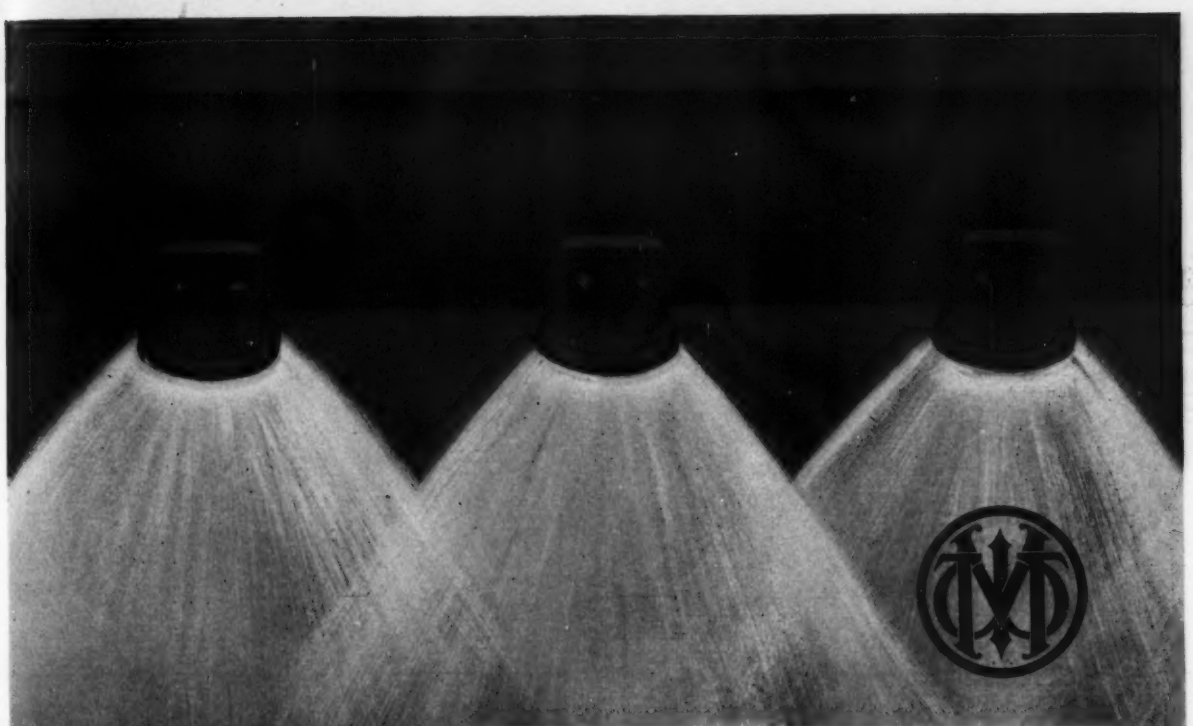
A New Transparent Paper

A new transparent paper has recently been introduced on the American market that has created an unusual interest on the part of those who merchandise their product by means of the individual package.

This new paper is known as Transcello. It has a varied appeal to the paper trade because it is transparent, lustrous, greaseproof, moistureproof, dustproof, sanitary, inexpensive and especially well adapted to the individual wrapping of paper. In addition to being of interest to the paper trade, it will supply a long felt need in many other important industries such as the manufacture of food products, meats, cigars, tobacco, cigarettes, bags, envelopes, confectionery, candy, hosiery, notions, lingerie, haberdashery, toilet articles. In all of these industries there is a constant and growing demand for an economical transparent wrapper.

Transcello is a specially processed, refined and improved paper. It is not only strong and flexible but inexpensive. It is not affected by acid, alkali or oxidizing agents of ordinary concentrations.

This new paper is manufactured by the Transcello Paper Company, 654-668 West Virginia Street, Milwaukee, Wis.



You will be interested in the new Shower Pipe Bulletin, just published.

The Shower you have wanted

Whether it be one perpendicular jet, or two slanting jets from opposite angles—either kind makes short work of the fibres coming under an M & W "Criss Cross" Shower Pipe.

That patented construction, with its overlapping fan-shaped jets, explains the thoroughness with which "Criss Cross" Shower Pipes wash Fourdrinier wires and felts, and their low water consumption.

Other features of "Criss Cross" design permit the use of comparatively large orifices, having minimum tendency to clog; and enable the jets, if clogged, to be instantly cleared by simply pulling a rod.

You can prove the worth of this efficient and dependable Shower Pipe in your own paper machine or rotary screen by a 30-day trial, with no obligation to keep it if you are not wholly satisfied.

Write us, stating the width of wire or felt, or the make of screen and length of its plates, and mention that a 30-day trial is desired.

THE MOORE & WHITE COMPANY
Established 1885
15th ST. & LEHIGH AVE. PHILADELPHIA, PA.

"CRISS CROSS" *shower pipes*

Ontario Paper Mills to Benefit By New Tariff

Importations of Grades On Which Tariff Has Been Highered Will Practically Be Prohibitive—Increased Rates Will Give More Work to Canadian Manufacturers and Will Materially Help Employment In the Paper Industry.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, September 22, 1930—The tariff changes announced by Premier Bennett this week caused a good deal of satisfaction in paper circles in Ontario. "The increased tariff on paper means more work for Canadians and is a fine thing for Canadian manufacturers as a whole," said Norman E. Wainwright, president of the Don Valley Paper Company, Ltd., Toronto. "It will do away with much unnecessary imported material that we can do very well without or manufacture in our own mills. For instance, our own mill has been working but three days a week. The increase will certainly give more work to Canadian mills and undoubtedly will help unemployment in the paper as well as in other industries. Distributors, too, he believed, would approve of the change, for they usually preferred to sell, if possible, Canadian manufactured goods." Fred L. Ratcliff, head of the Ratcliff Paper Company, Ltd., one of Toronto's largest paper distributors said: "It will make a big difference to Canadian mills. It is a good thing for the Canadian manufacturer, for it means that the importation of the papers on which the tariff has been increased to 35 per cent is practically prohibitive. As a matter of fact I believe it is almost unfair protection for Canadian manufacturers, for it seems to me that where the Canadian manufacturer formerly had protection in the home market, he now has control."

To Control Advertising Matter

The enactment respecting advertising matter is made at the request of Canadian concerns who asked for a classification under the tariff which would prevent merchants and others bringing in goods under wrong classification. "They are putting it on that per-pound basis," said Frank Rolph, head of Rolph, Clark, Stone, Ltd., lithographers, Toronto, "because under the old tariff we had a great deal of stuff entered on the pound basis which was equivalent in many cases to not more than 6 per cent on our stuff. And a great many were bringing in lithographed matter which they called advertising material, which was really labels, and which did not give us any protection from the big American producers. So we asked for a classification in the tariff which would prevent people bringing in things under any other classification than that under which they were entitled to enter. Advertising and printed matter, such as advertising pamphlets, show cards, price books, catalogues, patent medicine or other advertising circulars, etc., will now enter at 10 cents per pound, 12½ cents and 15 cents."

Safety Association Directors Meet

A meeting of the directors of the Ontario Pulp and Paper Makers' Safety Association was held in the association's offices in the Federal Building, Toronto, a few days ago, with George Carruthers, of the Interlake Tissue Mills in the chair. The resignation of H. G. Schanche, general woods manager of the Abitibi Power and Paper Company, from the chairmanship of the association's woods committee, was accepted with regret. Owing to pressure of business Mr. Schanche felt that he could not give the time necessary to the offices he held in the association. The reasons for the high cost of accidents in the woods operations of some of the members were discussed. W. C. Miller, chief inspector for the Ontario Department of Health, in his interim report to the organization referred appreciatively to the able assistance he was being given by Thomas Norman Dean, statistician for the Workmen's Compensation Board, in analysing the accident costs and tracing the huge costs to their source.

Safety Matters in Northern Mills

Returning this week from a three weeks visit of inspection to the pulp and paper mills in northern and northwestern Ontario, A. P. Costigane, secretary-engineer of the Ontario Pulp and paper Makers' Safety Association, expressed a good deal of satisfaction with the cooperation the mills are giving the association in its work. At Port Arthur the safety official inspected the Thunder Bay Paper Company's method of loading rolls of news print into the holds of the company's vessels and observed that this operation was being carried on with all reasonable safety precautions. The fact that no accidents have taken place during the entire work is a testimony to the efficiency of the loading crew, said Mr. Costigane.

The Fort Frances Pulp and Paper Company's plant was visited and the physical hazards inspected in company with R. M. Rickinson, superintendent of the plant. Mr. Rickinson has for years been an ardent advocate of accident prevention as shown both by his own activities and the education of the employes of the mill. The accident record of the mill for the first six months of the year is a good one and will likely be improved on in the closing quarter of the present year.

Before proceeding to Kapuskasing, Mr. Costigane sat in at a convention of sanitary inspectors in Winnipeg which proved of interest. Commenting on the Spruce Falls plant at Kapuskasing, Mr. Costigane said that the mill was unusually well organized and the physical hazards have been taken care of, with the possible exception of a few minor details. One thing that impressed him was that no matter how urgent a job might be in the way of a change over, trying out new equipment or any similar work, operations were not allowed to start until every precaution had been taken to prevent accidents, such as grounding, etc. This applies specifically to electrical equipment.

The Smooth Rock Falls mills is one of the few plants in Ontario that is running at full production. It being purely a sulphite pulp mill the physical hazards are somewhat different from the other mills which combine news print machinery and groundwood and sulphite equipment. Under the efficient management of H. C. Atkinson and S. A. Graham, the plant has during the last two years shown a remarkable advance in accident prevention.

At the Iroquois Falls factory it was found that, under the direction of E. T. Silver, accident prevention and compensation was receiving daily and hourly attention, while at the Sturgeon Falls plant of the Abitibi Power and Paper Company, which was also visited, a splendid non-accident record has been rolled up. It is now over 130 days since a lost time accident occurred at the plant, which is considered quite an achievement in safety circles.

The Espanola mill of the Abitibi company is not in operation but there is a gang of men busy there shipping wood and this work is being carried out with all due regard to the claims of safety measures. "On the whole, I was more than pleased with the sincere cooperation that is being given the association by all the mills I visited," said Mr. Gostigane.

Notes and Jottings of the Trade

Paper box manufacturers of Western Ontario and those from Toronto engaged in a golf match on the course at Ancaster a few days ago, the city men winning by half a point only.

REZISTAL KA-2

"NIROSTA"

An Economical Corrosion Resisting Steel for Paper and Sulphite.. Pulp Mills.....

REZISTAL KA-2 in THREE EXHAUSTIVE TESTS IN SULPHITE PULP MILLS, LOCATED IN NEW YORK, PENNSYLVANIA AND CANADA, showed almost absolute resistance to the severe corrosive action of sulphite liquors under various conditions of pressure and temperature.

REZISTAL KA-2, when processed and heat treated under Krupp-Nirosta Patents offers the maximum in resistance to corrosion, and in addition, provides sufficient ductility for fabrication into most every type of equipment for Paper and Sulphite Mills.

SOME USES:

Acid Lines and Tanks, Digester Linings, Digester Strainers, Digester Piping, Blow Pit Equipment, Digester Fittings, Digester Valves, Beater Bars, Machine Parts, Pumps, Valves, Doctor Blades, Fittings, Jordan Bars, Valves, Fans.

Our metallurgists are ready to answer your questions and work with your engineers. Write us NOW.

CRUCIBLE STEEL COMPANY OF AMERICA
General Offices: New York, N. Y.
Branches in all Principal Cities.

"Nirosta" and the interlaced triangles are the Trade-Marks for High Chromium-Nickel Steel Alloys produced under patents of Krupp-Nirosta Company, Inc.

Fred W. Halls Paper Company, Ltd., Toronto, had so many requests for additional copies of the color print "Where The Flyin' Fishes Play," sent out in January 1930, that they are issuing three more prints, making a complete series of four pictures. Kipling's famous poem "Mandalay" has supplied the inspiration for these pictures and a well known Canadian artist was commissioned to paint them. "A Wastin Christian Kisses" is the title of the second of the series printed from flat blocks with water color inks on Huronic Cover, Velvet Finish, a paper claimed to be suitable for high-grade printing with water color or oil inks.

The Consolidated Dyestuff Corporation, Ltd., Toronto and Montreal, has mailed to the paper trade Pattern Card I.G.296 "Aniline Dyestuffs on Paper Standard Dyestuffs." This pattern card illustrates a selection of dyestuffs most commonly used for the dyeing of paper in the pulp and is considered a useful guide to papermakers.

The Interlake Tissue Mills, Ltd., is rebuilding its No. 1 machine at the plant in Merritton, Ont., the work to include a new main dryer manufactured by Bentley and Jackson, of Bury, England, and calenders by the Dominion Engineering Works, Montreal. The company has just put on the market a new self-locking toilet roll fixture, chrome-plated.

T. Broadhurst, secretary of the Abitibi Power and Paper Company, Ltd., has returned to Toronto after a holiday stay at Old Orchard.

Tenders have been invited by the Abitibi Power and Paper Company, Ltd., Toronto, on five turbines of 66,000 h.p. capacity. No prices have yet been asked for on the generators of which there will be five, each of 55,000 h.p. Two of them will be 25-cycle and the other three will be 60-cycle. These will be used in connection with the company's big power development scheme.

Edward Beck, manager of the Canadian Pulp and Paper Association, Montreal, was recently in Toronto and the Niagara District, visiting various paper mill companies, including the Ontario Paper Company at Thorold, in which the owners of the *Chicago Tribune* have controlling interest, and all of whose production of news print is absorbed by that journal. Mr. Beck found it possible to take a cheerful view of the news that the International Paper Company is about to put into operation two more machines at its Dalhousie mill, reflecting that at least the raw materials consumed and the labor employed would be Canadian. About possible mergers of news print companies in Canada he had no opinions or information.

Within two months' time Toronto will have a new home for aged and needy women as the result of a gift donated by the late Sir William Gage, late head of the W. J. Gage Company, manufacturing stationers and paper dealers in that city. Announcement has been made by the trustees of the Ina Grafton Home Trust on behalf of Lady Gage, that the property known as the Patterson estate on upper Broadview Avenue had been taken over and that the building on it would be remodeled to fit the requirements of an institution for the needy. Sir William established the trust some years ago and contributed about $110,000. About $200,000 is now available for the institution, which will be operated by the United Church of Canada.

Two enthusiastic fliers from the Toronto paper trade were among the aviators who flew from this city to Brampton, Ont., a few days ago, when Lieut.-Col. Bartley Bull and Duncan O. Bull were hosts to a large number of guests at an aviation party on his grounds in Brampton. C. Ernest French, of the Toronto office of the Howard Smith Paper Mills hopped over to the neighboring town and in another plane went Miss Beatrice Shadlock, who is in charge of the order department in the company's Toronto office. Miss Shadlock has just recently devoted her attention to learning to pilot a machine and she is making excellent progress in the flying game.

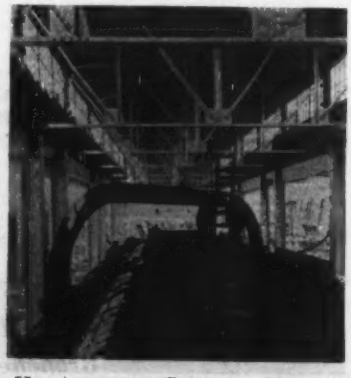
W. P. Bennett & Son, Front street, Toronto, widely known in the paper box industry, have introduced into Canada and are handling a British product known as Pennon Self-Adhesive Label Paper, which, the originators claim will economically supercede gummed paper in ordinary use. The adhesive side is non-sticky and when moistened and attached holds more powerfully than the best gum, under any conditions and in any climate, it is claimed. According to the claims of manufacturers better feeding and better register are assured to the printer, while there is also an end to curling. The paper is made for litho and for varnishing, while the adhesive formula can be applied to practically any class of paper. The manufacturers are A. M. Peebles & Son (1927) Ltd., Rishton, Lancashire, England.

A contract has been awarded for the erection of a warehouse at the rear of 744 Yonge street, Toronto, for Routley's Ltd., manufacturers of wall papers.

Charles V. Syrett, president of the C. V. Syrett Paper Company, Toronto, has just returned from a business trip to Ottawa and Montreal where he visited a number of the paper mills.

Wholesale Price Index for Paper

WASHINGTON, D. C., September 24, 1930.—The wholesalers price index number for paper and pulp for August was 83.8 compared with 83.8 for July and 88.2 in August of last year taking 1926 at 100 according to the Bureau of Labor Statistics, Department of Labor.



VIEWS SHOWING RAPID CONSTRUCTION ON THE NEW BOILER HOUSE AT THE GATINEAU MILL OF THE CANADIAN INTERNATIONAL PAPER CO. AT THE LEFT IS THE EXTERIOR AS IT LOOKED SEVERAL WEEKS AGO. THE PICTURE AT THE RIGHT SHOWS THE INSIDE OF BOILER HOUSE LOOKING OVER THE TOP OF THE BOILERS.

Naylor Pipe SPIRALWELDED

To Give You These Three Greater Pipe Values

...And in addition Naylor *Spiralweld* Pipe is *handy*. It can be cut and fit by the welding torch method. It takes flanged connections, thereby eliminating troublesome threaded joints.

1. TIGHTNESS. Inherent in Naylor Pipe, because of its spiralwelded lock-seam truss construction. Consequently, Naylor Pipe requires no special treatments to make it tight. It is made to be tight... and it stays tight.
2. STRENGTH. Maximum in Naylor Pipe, because it's a pressure pipe.
3. LIGHT WEIGHT Minimum in Naylor Pipe, because it weighs one half as much as standard weight wrought pipe but carries the same pressures.

...And in addition Naylor *Spiralweld* Pipe is *Permanent*. It is made of Toncan Iron for greater resistance to rust and corrosion. (The Toncan Iron used in Naylor *Spiralweld* Pipe is acid pickled to remove all mill scale, thus avoiding galvanic corrosion.)

For these reasons, more and more Mills are standardizing on Naylor *Spiralweld* Pipe. *So will you* ...once you've tried it.

NAYLOR PIPE COMPANY, Main Office & Plant, 1230 E. 92nd St., CHICAGO

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3116 Chrysler Bldg. New York ♦ Witherspoon Bldg. Philadelphia ♦ 507 Pittock Bldg. Tulsa ♦ 2301 Commerce St. Houston ♦ 402 Petroleum Bldg. Ft. Worth

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660 St. Catherine St., West

CHAMPION & BARBER, Inc.
506 Subway Terminal Building
Los Angeles, California
Exclusive Distributors: California, Nevada & Arizona

TONCAN COPPER

Naylor Pipe

Maximum Structural Strength Mo-lyb-den-um With Minimum Weight

IRON

ADDED VALUES
Naylor Pipe, coated with lead by the "Leadizing" process, gives a resistance to chemical solutions in the paper mill that results in a further protection to your pipe investments.

Toncan Copper Molybdenum Iron possesses a superior corrosion resistance, making it the favored pipe material.

Where corrosion is not a problem, Naylor Pipe can be furnished in steel.

Western Hemlock

C. R. Berry, Forest Engineer

Tsuga Occidentalis has been one of the most maligned woods on the western hemisphere since the mythical Paul Bunyan and Babe, his blue ox, made the first inroads on the Northwestern forests. It intrudes itself into the classical company of the dignified cedars and firs, much to the chagrin of the seeker after "merchantable" lumber and other wood commodities, and, as the higher levels are reached by the logger, it no longer is satisfied with just "keeping company" but becomes the "whole show."

Then again, it is generally confused with the eastern variety of hemlock, a brashy wood which, in later years has been on the eastern markets as a common grade lumber material. There is, however, no comparison between the two varieties of hemlock, for the western variety possesses characteristics which lift it away out of the class of its eastern relative.

Western Hemlock Coming Into Its Own

Western hemlock is just coming into its own as a lumber product—for an excellent cheap substitute for hardwood flooring and, chiefly on account of its light color, almost white, the Japanese are consuming increasingly large quantities of it in their buildings, for squares, lintels, framing, etc.

But in this brief article to consider the virtues of western hemlock a lumber product are not so apropos as is a consideration of it as a pulp material.

After a fairly intensive study of most of the pulping species of the earth, the writer does not hesitate in making the unassailable statement that western hemlock, *tsuga occidentalis,* easily tops the list for being a superior all-purpose pulpwood. To some eastern wood experts this may sound like idle boasting on the part of one admittedly in favor of a western wood; but to fully prove this assertion is not so difficult when all of the characteristics of the comparative species are paralleled.

First, let me quote from one of the many noted authorities of the eastern part of the United States as to just what constitutes an ideal pulping wood; this authority, G. S. Witham, Sr., writes:

What Constitutes Ideal Pulpwood

"1. The wood should contain a long, strong and yet soft and tender fiber. Woods in which these characteristics stand out, make the best paper and are used with comparative economy.

"2. Wood should be relatively free from intercellular constituents, such as resins, gums, tannins, etc. Highly resinous woods and those containing large percentages of tannins, gums, etc., are converted into paper with considerable difficulty and are used only for the cheaper grades of paper.

"3. The wood must be available in sufficient quantities, reasonably accessible and therefore, fairly economical in price. Some woods are admirably adapted to the manufacture of pulp and paper, but are often eliminated because they are not sufficiently available or are in greater demand for other purposes.

"4. White fibered woods are preferred since most papers are white or light in color. Bleaching at great expense is required to whiten some woods. Woods that are white or nearly so, are much more in demand than those of deep or dark colors.

"5. The wood must be sound, reasonably clear of knots, bark, pitch pockets and other defects. Sound wood, clear of all foreign matter or defects is especially required in certain processes of pulp manufacture.

"6. The wood itself should contain large quantities of available cellulose. Most woods contain between 40 and 60 per cent of cellulose. Since the basis of all paper is cellulose, it is desirable to select a wood for pulp that contains cellulose in a form that is readily separated without loss by the destructive action of chemicals which are used in the various cooking processes.

Here we come face to face with all of the virtues an ideal wood should possess and the defects that should be absent. And I would unhesitatingly say the answer to Mr. Witham's bill of particulars is western hemlock.

A New Wood Introduced

Quite recently a new wood has been introduced into the eastern pulpwood markets. This is wood harvested in northern Russia, bordering on the White Sea. Some make the claim for it that it is somewhat superior to the spruces and balsams of eastern Canada and northeastern United States. This claim is based largely on the assumption that it is a denser wood and not so brashy as the pulpwoods of Canada and the United States. Just how much of practical value there may be to this assumed superiority remains to be fully proven.

In one great characteristic, however, the Russian kadar and black spruce pulpwood is identical to that of the spruce and balsam species of eastern Canada and northeastern United States. It is a *resinous* wood. If it is denser than its American relatives, it is quite probably because it is more highly impregnated with resin.

An unfailing characteristic with which every dendrologist and every forestry expert is fluently conversant, is that where the winters are severe, conifers produce hard, resinous seasonal rings, while the summer wood, due to the short, hot summers is generally soft and often spongy. There is every elemental reason to believe the pulpwood garnered from the icy regions of northern Russia are no better in quality than the pulpwood species so widely used in the paper making sections of eastern Canada and the United States.

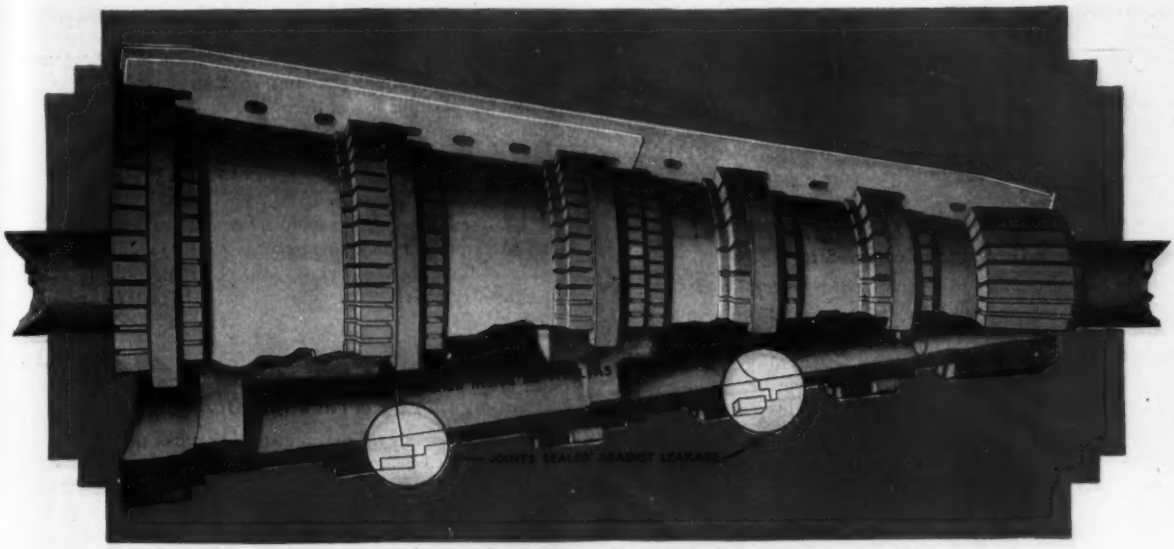
According to G. S. Witham, Sr., the presence of any amount of resin in pulping wood is deleterious. Of course, we all know it is. But by far the greatest majority of pulping woods now used are resinous, for the simple reason they are about all the species which are available in quantities sufficient to meet the great consumption of wood for paper making.

Western Hemlock Is Not Resinous

Now, strange to say, western hemlock is *not* resinous. Stranger to say, western hemlock is a thoroughbred. Most of the forest species found on the North American continent are cross-bred, "sports" and badly mixed generally. The majestic Douglas fir of the Northwest, inferior only in size to the famed Sequoia giants of California, is now pretty generally conceded to be a bastard hemlock—and so we could rule out many other conifers and place them, inferiorially, at the roots of the western hemlock.

Western hemlock, without rehearsing another of its many virtues, is superior as a pulping wood to either the eastern spruces and balsams and the Russian kadar and spruce because it is a non-resinous wood. But a few of its other virtues are not by any means unimportant. Largely by reason of its being a non-resinous wood, it is a whiter wood than any other of the conifers. Every pulp mill operator would become gray less quickly did he have the positive assurance that his "cook" would be the same color, day in and day out. While it is true that tannic acid is present in western hemlock, the pulp mill operator of the West coast has easily adapted himself to this feature and varied his cooking formulas to suit this peculiarity, which anyway, has no apparent disadvantages.

The resultant pulp from western hemlock achieves a whiteness of color not approached by spruces and balsams except by treating the latter to strong bleaching agents. This in itself is an economical factor of no small proportions, but the economies do not end at that and in the fact that a stronger fiber is the result, gives



Details like this mean More Profit for You!

"An infinite capacity for taking pains", is given as a definition for genius. We don't call it "genius" at the Noble & Wood plant — we call it "standard shop practice".

Taking pains — in design, in materials, in construction — is a fundamental here. That's one reason why a Noble & Wood Jordan is just about as fine and dependable a piece of equipment as you can put into your mill.

Study the dissected Precision Plug for example. Jordan plugs look very much alike — but you'll not find another so painstakingly built as this. Made in three sections, each accurately machined *inside* as well as out, fitted together with male and female joints, and hydraulically pressed on the shaft to micrometer fit. Elaborate construction,—but the result is a precisely tapered plug body with a perfection of balance attainable in no other way.

That's just one detail. Every other detail of every one of the eight Noble & Wood Jordan models reveals the same scrupulous craftsmanship. That's why you find so many of them in the mills where profitable production and quality go hand in hand. Check up on profitable, trouble-free Noble & Wood Jordan performance—we'll be glad to give you all the information you want.

NOBLE & WOOD
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Hoosick Falls New York

Pacific Coast Branch: 355 Everett St., Portland, Ore.

it a supreme place in the practical economies of pulp mill operation.

In being a non-resinous wood, western hemlock loses nothing by way of fiber length, fiber strength and general workability. It fabricates into an even, durable product, capable of a toughness necessary for the making of high grade bonds. In this respect, the highest compliment that can be paid western hemlock is that the inclusion of spruce (Sitka) has been almost entirely discontinued in the pulp and paper mills of the West coast making sulphite paper products.

Grows to Medium Size

Western hemlock grows to medium size as forest species run in the Northwest. By that rule, an average diameter of 30 inches is indicated. How does this compare with the "toothpick" varieties of Russia? And, for that matter, Quebec, Ontario, Newfoundland, Nova Scotia and what is left in northeastern United States. Again; while it is of no particular import that a growth of 60 cords per acre of western hemlock is a low average, 20 cords to the acre in the northeastern (and Russian) forests is a good average.

This last comparison, however, has a rather interesting sequel. A tree 8 inches in diameter contains as many black knots as a tree 30 inches in diameter! More interesting still, western hemlock, chiefly by reason of its non-resinous character, produces but few black knots as compared with the resinous conifers.

Some pulp engineers hold to the fallacy that the slower growing species produce the strongest fiber. This possibly would be true were it not for the fact that in order to break up the more refractory wood structure, a stronger cooking agent is necessary. The writer holds to the opinion that the strength of the attacking chemical solution exerts a greater influence on the strength of the fiber than is found in the fiber itself.

It is somewhat canny to state that in all probability the 8-inch tree in eastern Canada and northeastern United States is as old as the 30-inch tree in northwestern United States and British Columbia. This same comparison can safely be applied to the Russian pulp woods.

A fast growing, white, non-resinous pulpwood is the ultimate aim of the sulphite pulp and paper mill operator. Western hemlock is the only conifer known by the writer to possess these combined virtues—and in amounts, to the vision at present, almost inexhaustible.

The minds of western engineers are studying the situation from its many angles. Two possibilities, standing head and shoulders over others, are worth briefly alluding to. One is the possibility of overdoing in the manufacture of *pulp* on the West coast. The other is the problem of furnishing a new source of supply to the *pulp* and paper mills of eastern United States, with particular emphasis on the pulping end of the mill, in order that the pulping department may continue to function and thereby save the differential between the pulping of the raw material and its conversion into paper products.

There is no doubt but that within the next few years, vast quantities of western hemlock wood will be laid down at the doors of the pulp mills in eastern United States and successfully meet the challenge of the West coast pulp and paper industry—and incidentally, prove the fallacy of importing pulp cordwood from Russia and Siberia.

Salvage and Reclamation Division To Meet

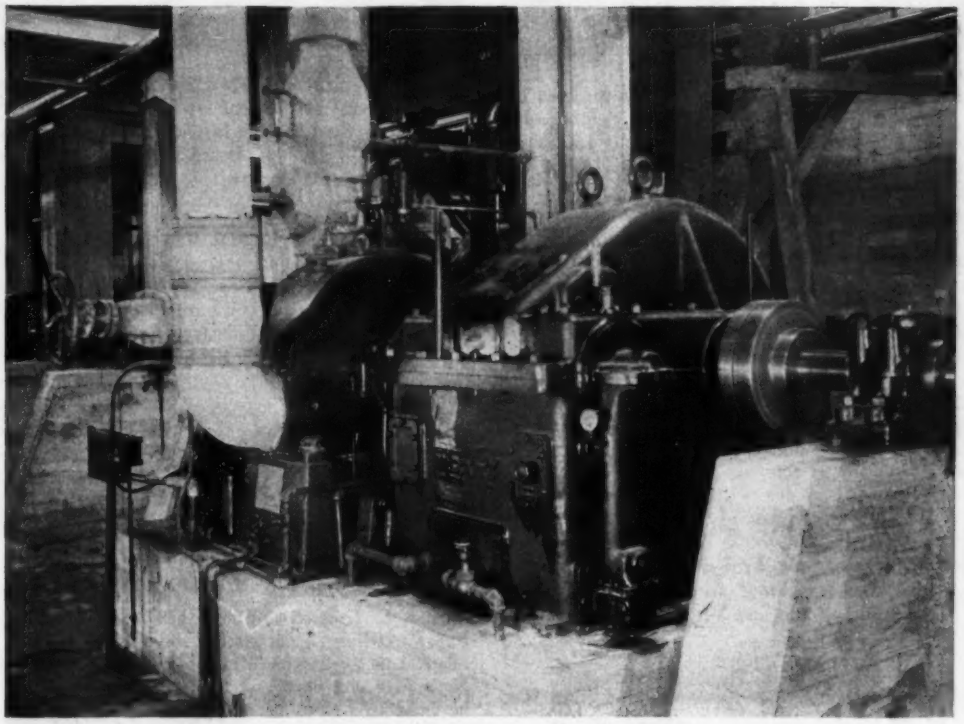
Economical operation of industrial plants through the reclamation of waste materials and the efficient and prompt disposal of surplus and obsolete equipment will be the subject around which will center the discussions of the Salvage and Reclamation Division of the National Association of Waste Material Dealers, Inc. to be held at the Clifton Hotel, Niagara Falls, Canada on September 22 and 23.

Many of America's largest industrial and public utility corporations will be represented at this conference. Papers will be presented as follows: "Training Men to Prevent Waste," by F. W. Huber, of the American Rolling Mill Company; "Salvage Operations in the Glass Industry," by E. L. Gaines, of the Owens-Illinois Glass Company; "Salvage and Reclamation Divisions in Industrial Plants as an Aid to Safety and Fire Protection by Removing Hazards," by Geo. H. Miller, of E. I. du Pont de Nemours & Co., Inc.

Remington Rand, Inc., with plants in Buffalo and Tonawanda are acting as hosts on the occasion of the conference and will tender a dinner to those attending on Monday evening, September 22 at the Clifton Hotel. The same company will entertain delegates on Tuesday the 23 at luncheon after which they will inspect salvage and reclamation operations as carried on at the Remington Rand plant in Tonawanda. Invitations for this conference are being extended by Chas. M. Haskins, Secretary of the National Association of Waste Material Dealers with headquarters in the Times Building, New York.

NEWSPRINT FROM THE MILL OF THE INTERNATIONAL POWER & PAPER CO. OF NEWFOUNDLAND, CORNER BROOK, NEWFOUNDLAND, BEING UNLOADED AT MOBILE, ALA.

TERRY



10 to 1 SPEED RANGE WITHOUT STEPS

The Terry Turbine Paper Machine Drive can be furnished to operate over any speed range up to 10:1.

High speeds and low speeds are available without any change in the driving equipment other than a small governor adjustment. All speeds from minimum to maximum can be secured without steps. Unusually accurate regulation is obtained at all settings.

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Obituary

W. A. O. Weber

[FROM OUR REGULAR CORRESPONDENT]

LAWRENCE, Mass., September 13, 1930—William Anton Oscar Weber, 54, vice-president and general manager of the Munroe Paper Company, of Lawrence, passed away Friday, September 12, at Gold River, near Halifax, Nova Scotia, where he was visiting in company with his wife.

The deceased was prominent in paper circles throughout the world for the greater part of his life and was a member of a family which for over 200 years was engaged in the paper making industry in Europe He was a native of Gratz, Tyrol, Austria, and a graduate of the University of Vienna.

During his career he was affiliated with some of the largest paper manufacturing mills in Norway, Austria, France and Belgium, and came to this country in 1915 after his concern in Belgium had been destroyed in the course of the World War.

In this country he was very closely associated with the paper industry and was affiliated with the International and American Writing Paper companies. He introduced many grades of paper to the industry in this country which had not been manufactured here before. Since 1920 he served in an advisory capacity in a large number of paper manufacturing mills, and up to the time of his death he served in the aforementioned official capacity with the Munroe Paper Company of this city.

The deceased is survived by his wife, Sarah Ann (Briggs) Weber; two sons, William, a graduate of Yale in 1929, and Max Cyril, class of 1931 Yale; two daughters, Vera, and Mrs. George Church, of Great Harrington; two brothers, Hanz and Fritz of Ober Ursel a Taunus, Germany; four sisters, Grete, of Frankfurt, Germany; Wilhelmina, Tonta and Yetta, all of Austria.

Perry H. Clifford

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., September 13, 1930—Perry H. Clifford, secretary-treasurer of the C. P. Lesh Paper Company, and a director of Butler University for twenty-five years, died shortly before noon Saturday, September 13, at his home, 124 Downey Avenue.

M. Clifford had been ill only a short time, and his death was attributed to heart disease. He was born and reared in Indianapolis and had been a life-long member of the Downey Avenue Christian Church. He was sixty-four years old.

As a member of the board of trustees of Butler University for many years, he had served on many important committees through the building of the university's endowment fund and through its new building program and final establishment at Fairview. He was a graduate of Shortridge High School and was graduated from Butler College in the class of 1889. He had seen the school grow from its early days to its present size and importance.

Mrs. Georgia Butler Clifford, the widow, and a son, Scot B. Clifford, are members of the immediate family. Mrs. Clifford is the daughter of Scot Butler, who was one of the early presidents of the college, and is the granddaughter of Ovid Butler, founder of the college. The son is also connected with the Lesh Paper Company. A sister, Mrs. Grade Clifford Smith, lives at Fort Worth, Tex. Mr. Clifford's father was Amos Clifford, who was a minister and business man in the early days of Indianapolis.

Mr. Clifford had been a member of the Columbia Club for many years and was a member of the *Delta Tau Delta* Fraternity.

Hilton U. Brown, president of the board of trustees of Butler University, paid the tribute to Mr. Clifford that he had been a faithful and unfailing worker for the school.

"He was one of the faithful and loyal alumni," Mr. Brown said, "and as a member of the board was unfailing in his attention to committee assignments and all other obligations. He brought a sound judgment to the solution of student and board problems and could always be counted on as a generous and available member. He was a man who worked without thought of personal gain or popular applause."

Roy E. Parker

[FROM OUR REGULAR CORRESPONDENT]

BROWNVILLE, N. Y., September 20, 1930—Roy E. Parker, for a number of years office manager of the Brownville Board Company, died this week at the local hospital following a recent operation for appendicitis. He entered the employ of the local concern in 1914 after completing a college course and his rapid accumulation of the various details of the business won him rapid promotion.

When the recent war broke out he enlisted and saw considerable service in some of the heaviest fighting. Upon his return he was employed by the Carthage Machine Company but an attractive offer from the Brownville Board Company resulted in his return to the employ of that concern.

Eugene Van Brocklin

[FROM OUR REGULAR CORRESPONDENT]

BROWNSVILLE, N. Y., Sept. 20, 1930.—Word was received this week of the death at Utica of Eugene Van Brocklin, formerly prominent in the paper industry of this section. He was 58 years old and his death was caused by a cerebral hemorrhage. When a young man he learned the trade of a millwright in which capacity he was employed for many years by the Carthage Sulphite Paper and Pulp Mills. About twenty-two years ago he moved to this village where for a considerable time he was employed as master mechanic by the Brownville Paper Company. He retired several years ago because of ill health. He is survived by his wife and two sons.

Fred L. Becker

Fred L. Becker, assistant sales manager of the Continental Paper and Bag Corporation, of New York, died on Tuesday night, September 16, in the Mount Vernon Hospital, Mount Vernon, N. Y. He was born and educated in Cleveland. Four years ago he came to New York to assume the position which he held at his death. He was manager of the Cleveland branch for sixteen years.

William Goodbody

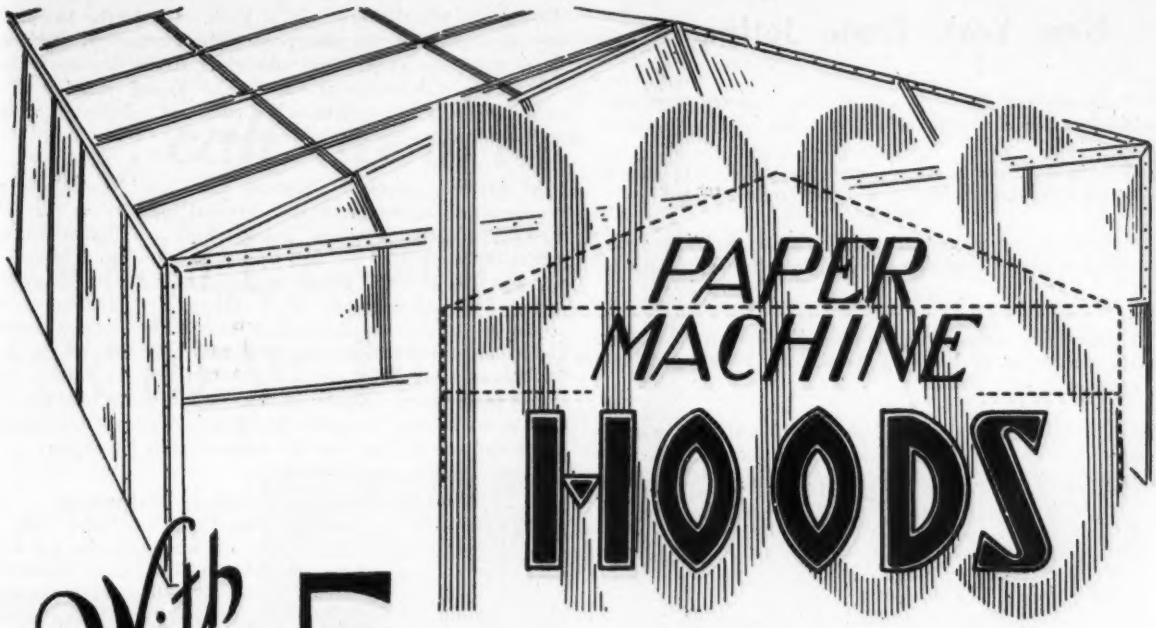
The death of William Goodbody on Monday, September 8, is announced. Mr. Goodbody was the founder of and had been associated with the William Goodbody Envelope Company, of 131-133 Wooster street, New York, for forty-six years.

Permutit Co. Buys Paige & Jones Departments

The Paige & Jones Chemical Company announces that it has sold to the Permutit Company the Zeolite and Lime Soda Water Softening and Filter Departments of its business including machinery, inventories, patterns and drawings relating thereto. It has been manufacturing Zeolite water softening apparatus as licensee under the Permutit Company's patents. The Permutit Company with its large engineering staff will be in position to furnish repair parts and replacements for Paige-Jones mechanical equipment now in use. The Paige & Jones Chemical Company will continue the chemical branch of its business in which it has held a prominent position for the past sixteen years.

Maryland Paper Board Co. Buys Marley Mill

The property of the Marley Paper Manufacturing Company at Childs, Md., was sold to the Maryland Paper Board Company which was incorporated, it is stated, for the purpose of bidding on this property and acquiring it if possible. The purchase price of the property was $84,500, which was not sufficient to meet the mortgage debt. There will, therefore, it is said, be nothing left to pay the claims of merchandise creditors.



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Providing all the obvious advantages of using paper machine hoods and at the same time eliminating all heretofore existing objections to their use, the Ross removable panel hoods are acclaimed as a noteworthy achievement. The reasons for the enthusiastic endorsement already accorded them are found in their five major advantages, namely:—(1) Built of structural steel and Johns-Manville Transite Asbestos lumber—fireproof, moisture and acid resisting with maintenance cost being practically negligible; (2) Panels and drop curtains built complete in our shops before shipment greatly reducing usual erection time and labor costs; (3) Designed for erection without interference with normal operation of machine; (4) Construction and assembly permits removing or reassembling of any one or more panels without disturbing balance of hood; (5) Provide wide overhang and deep drop curtains on hinges or hooks to permit lifting up or removing for quick access to dryers and rolls.

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New York Trade Jottings

Dard Hunter and H. G. Beach, of Dard Hunter Associates, Lime Rock, Conn., are prominent New York visitors this week.

Application has been made to list voting trust certificates of the Celotex Company on the New York Stock Exchange.

* * *

The Paper Board Exchange held a luncheon and meeting at the New Yorker Hotel, New York, last Friday, September 19.

* * *

The Rope Paper Sack Manufacturers Association held an interesting meeting at the Biltmore Hotel, New York, last Thursday, September 18.

* * *

Pierre S. du Pont, chairman of E. I. du Pont de Nemours & Co., sailed from New York last Friday, September 19, abroad the steamer *Saturni*, bound for Naples, Italy.

* * *

George W. Sisson, Jr., president of the Racquette River Paper Company, Potsdam, New York, is spending a few days in New York City this week.

* * *

Business conditions and other topics of interest to its members were freely discussed at the regular weekly luncheon and meeting of the New York Division of the Salesmen's Association of the Paper Industry, held in the Fraternities Club, Monday.

* * *

J. D. and H. L. Zellerbach, prominent figures in the Pacific Coast paper industry, are in New York this week. Their father, I. Zellerbach's Diesel driven steel yacht *Janidore* is in New York Harbor at present, being prepared for a trip to Havana, Cuba.

* * *

Plans for an advertising and sales program by the Johns-Manville Corporation, New York, concentrated upon the re-roofing problem were announced at a sales meeting of the firm at Syracuse. The officials of the company will invest $500,000 in advertising immediately. They believe that business is turning the corner.

* * *

Frederick H. Chase, for the last seven years with Daniel M. Hicks, Inc., and previously for many years president of Chase & Norton, Inc., has again gone into business on his own account, at 518 Water street, New York, specializing in the various grades of waste paper which he has handled for many years.

* * *

Harry Elias & Co., general paper merchants, of 19-21 East Seventh street, New York, are celebrating their ninth anniversary this month. Since the time of organization in September, 1921, the company have increased their quarters considerably and now occupy three stores at 13, 19 and 21 East Seventh street, the original headquarters consisting of one store at 21 East Seventh street.

* * *

Carl Maglathlin, formerly general manager of the Lindsay Paper Company, Philadelphia, has joined the Seaman Paper Company at its New York office, it was announced by George M. Seaman. The change was effective September 16. Mr. Maglathlin will represent the Seaman company, which recently withdrew from the paper merchandising business to further stress its direct representation of paper mills, in the eastern states.

* * *

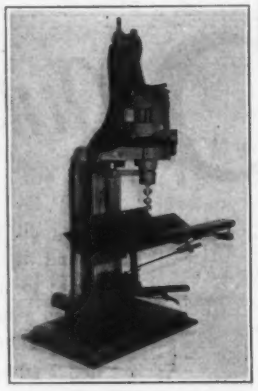
H. L. Derby, president of the Kalbfleisch Corporation, who has been a member of the National Association of Manufacturers for many years, has just been renominated as vice president of the association for New York. Mr. Derby has already served as director for one year. The election of vice presidents and other officers will take place at the Roosevelt Hotel, New York, October 6 at the regular annual meeting of the organization, which will be in the nature of a four-day business and industrial conference proceeding.

* * *

Al Alvarez, Grasselli Chemical Company, New York, was crowned golf champion of the chemical industry at the Salesmen's Association's annual outing, held at Briarcliff Lodge, Briarcliff Manor, N. Y., last week. In spite of a bad 45 for the first nine holes Al turned in a card of 85, having played the last nine in four over par. E. A. Orem, E. I. du Pont de Nemours & Co., won second gross prize with 89, Richard Noonan, Drug Products Company, took third with a 92 and Robert Quinu, Mathieson Alkali Works, was fourth with 99. There were other lower gross scores between 92 and 99 but those who got them took prizes in other competitions. Robert Wilson, Dow Chemical Company, won the low net for members with 103-33-70.

New Machine for Cleaning Pulpwood

Many mills often experience difficulty in producing pulp and paper of desired cleanness, because the wood contains pin knots, rotten knots, ingrown bark, etc., which give off dirt. Heretofore, the idea has been to ignore these defective parts and depend on their being screened out of the stock after cooking or grinding, but in practice, it is found that many of the knots or at least parts of them, are broken up into countless specks of dirt which are so small that they pass right through the screens along with the accepted stock.



The DeZurik Knot Boring Machine is designed to clean out the defective knots after the wood has been barked. Installation is made in the wood-room where the blocks to be cleaned are selected from the conveyor just before the wood passes to the grinders or chippers.

The knot boring machine consists of a cast iron frame and base upon which are mounted the steel table and boring mechanism, which includes a 3 hp., ball bearing motor with a direct connected auger and a blower for removing the shavings. The entire boring mechanism is mounted on an adjustable sliding base and is raised or lowered by operating the valve controlling a pneumatic or hydraulic plunger. Boring is accomplished on the exhaust stroke, so that the feed is uniform regardless of pressure variations. A collapsible steel pipe covers the auger directing the shavings into a blower and serves as a protection for the operator.

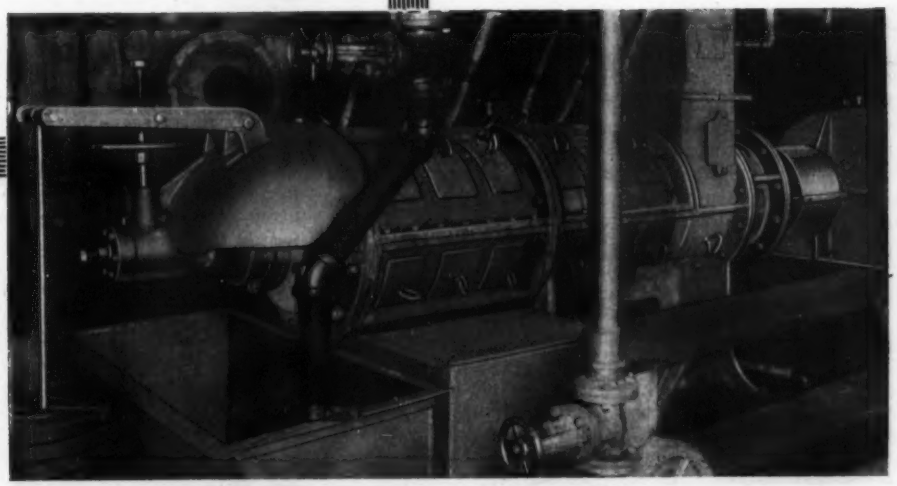
Full information is available by inquiring of the builders, DeZurik Shower Company, Sartell, Minnesota. European Sales Agent: John Palmen, Helsingfors, Finland.

Roessler & Hasslacher Changes

The Roessler & Hasslacher Chemical Company, Inc., announces the following changes and appointments in personnel; Dr. W. E. Zimmerli, who has been operating with the Commercial Development Division at the New York Office, has been appointed head of the Commercial Development Department at Niagara Falls and will make his headquarters at that place.

New appointments to the technical staff at the Niagara Falls plant include: Noah S. Davis, Jr., Ph. D., Yale, 1930; Alton Gabriel, Ph. D., Cornell, 1930; H. E. Klein, Ch. E., Purdue, 1930; Lloyd Mann, B. S., Middlebury College, 1930; H. A. McPhail, M. S., Toronto University, 1930; W. T. Rhinehart, M. A., Indiana University, 1930; W. B. Tanner, Ph. D., State University of Iowa, 1930; Jane Williams, B. A., Indiana University, 1930.

.... call upon the VALLEY-VOITH SCREW PRESS



IF you want to cut the cost of dewatering your pulp—call upon the Valley-Voith Screw Press.

It will begin saving money for you right from the start .... and, at the same time, improve results.

It will enable you to do away with expensive wires and felts—cut down on power—reduce labor cost—utilize much less floor space—and greatly increase capacity.

In addition, you will be able to obtain consistencies which are possible by no other method.

Twenty-eight installations are proving the all-around superiority of the Valley-Voith Screw Press. And from each of these installations we have gathered data which enables us to give tested information on what the machine can be expected to do for you.

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Western Mfg. & Sales Div.: Smith & Valley Iron Works Co., Portland, Ore.
Canadian Representatives: Pulp & Paper Mill Accessories, Ltd., Montreal, Canada

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Kaukauna, Wis.—The Thilmany Pulp and Paper Company, Kaukauna, is considering the construction of a new one-story addition to mill, to be used for wood pulp service. Estimated cost has not been announced. Plans have been approved by the State Department.

Medford, Mass.—The Russell Box Company, Gerrish avenue, Chelsea, Mass., has concluded arrangements for a lease of the No. 1 mill of the American Woolen Company, Medford, and will occupy the new plant for the manufacture of paper boxes and containers. Production will be concentrated at the new location with the removal of the present plant at Chelsea and factory at Waltham, Mass., to that point. Additional production facilities will be provided for enlarged output. The Specialty Machine Company, Waltham, manufacturer of paper box-making machines, paper bag machinery, etc., an affiliated organization, will also be removed to Medford and occupy a portion of the leased property. The Russell company, headed by Harlow M. Russell, has been operating at Chelsea since 1903.

Los Angeles, Cal.—The George & Sherrard Paper Company, Wellsburg, W. Va., affiliated with the International Paper Company, New York, is reported to be considering the construction of a new mill on the Pacific Coast, in the vicinity of Los Angeles, for the production of multi-wall paper valve bags for cement, plaster, etc. It is said that the plant will be of extensive proportions for requirements of Pacific Coast trade. Company is now represented at Los Angeles by W. S. Weaver, 307 East Third street.

Palatka, Fla.—The Southeastern Development & Holding Company, Palatka, care of A. M. Houston, president, Palatka Commercial Club, recently organized by Mr. Houston and associates to manufacture paper and fibre products, has acquired property in Putnam County for initial mill, for which plans will be prepared at once. It will consist of several units for the production of fiber and pulp, including machine shop, boiler house and other mechanical units. At a later date, it is proposed to install a paper-making division for manufacture of ledger and high-grade writing papers. The entire project is reported to cost over $500,000 with machinery. It is understood that flax will be used as raw material and that production will be carried out under a special process; the company will arrange to grow large quantities of flax in the vicinity of the mill, and will also contract with farmers for additional supply. Mr. Houston will head the new organization. Others interested include W. C. Rose, Jacksonville, Fla.; and Henry E. Ellis, also of Jacksonville.

Portland, Ore.—The Independent Paper Stock Company, 485 Overton street, has awarded a contract to W. G. Miller, Chamber of Commerce Building, for alterations and improvements in its storage and distributing building at location noted. An estimate of cost has not been announced.

Chicago, Ill.—The Vortex Manufacturing Company, 421-29 North Western avenue, manufacturer of paper cups, etc., is continuing its expansion program recently inaugurated, and has awarded a general contract to the J. W. Snyder Company, 307 North Michigan avenue, for a new addition, to be four-story, 100 x 185 feet, estimated to cost about $300,000, with machinery. A building permit has been issued and work will be placed under way at ance. Weiss & Niestadt, 53 West Jackson Boulevard, Chicago, are architects. The new unit will be pushed to completion and will provide for large increase in present output.

Lawrence, Mass.—The Forbes Lithograph Manufacturing Company, 10 Post Office Square, Boston, Mass., has removed its paper-coating department from main plant at Chelsea, Mass., to a mill at Lawrence, where production will be carried on as heretofore. The new quarters will allow for increased manufacture in the coating division, and will also permit enlarged output in the finishing department at Chelsea, and which will continue at that location. It is understood that additional manufacturing facilities will be provided for the last noted division.

Ridgefield, N. J.—The Lowe Paper Company, River Road, has applied to the Government for permission to proceed with the installation of a new filter plant at its local mill. The unit will be of concrete construction, one-story, 46 x 115 feet, and is reported to cost over $65,000, with equipment. Frederick L. Smith, 21 East Fortieth street, New York, is architect and engineer.

Washington, D. C.—The District Waste Paper Company, Washington, is said to be planning the rebuilding of its storage and distributing plant at 71-77 O street, recently damaged by fire with loss reported at close to $25,000, including building and contents. William E. Mantz is president.

Cooperstown, N. D.—The Prairie Fiber Company, Cooperstown, has approved final plans for a new mill unit and will proceed with superstructure at once. It will be one-story, estimated to cost close to $50,000, with equipment. It is proposed to have the plant ready for service at an early date.

Quincy, Ill.—Fire September 13, caused slight damage in the straw room at the corrugated paper board mill of the Robert Gair Company, South Front street, Quincy. An official estimate of loss has not been announced, but is reported as small.

Niagara Falls, N. Y.—The International Paper Company, New York, has closed its De Grasse news print mill located between Lake Champlain and the St. Lawrence River, New York. The tonnage heretofore produced at the plant will be carried out at the Canadian mills of the company at Gatineau and Three Rivers, Que., and Dalhousie, N. B. This is said to be the eighth mill in the United States closed by the company this year, with the transferring of news print production to the Canadian plants.

Marrero, La.—The Celotex Company, Chicago, Ill., is operating its local mill on regular production schedule, and is making extensive shipments of insulating board to different manufacturers of electric refrigerators. The company recently closed a contract with Servel, Inc., Evansville, Ind., for a quantity of board for such purpose, and a recent consignment covered 8 carloads to that point.

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FOREIGN PAPER TRADE FOR HALF YEAR

United States exports of paper base stocks, paper and paper products during the first half of the year kept well within reasonable bounds of the totals for the corresponding period last year, despite the world-wide slump in the paper industry, according to the Paper Division of the Department of Commerce. The total exports of paper base stocks during the first six months were valued at $2,535,199, as against $3,010,443, last year, or a decline of approximately 15 per cent. The most conspicuous decrease was in rag exports, which was 57 per cent short of the first six months' record last year, followed by sulphite pulp, with a 21 per cent decrease and "other wood pulp," which dropped 18 per cent. The losses were, however, partially compensated for by the gains in shipments of pulpwoods and soda wood pulp, the former increasing by 110 per cent and the latter by 43 per cent. The total June exports of paper base stocks were approximately 23 per cent less than in the preceding month and 3 per cent less than in the corresponding month last year.

Exports of paper and paper products in the first half of the year totaled $16,728,889, which was $2,107,378 less than in the corresponding period last year. The items that showed decreases when compared with last year's figures were wall boards of paper and pulp, 52 per cent; newsprint, 36 per cent; surface coated paper, 35 per cent; vulcanized fiber in sheets, strips, rods and tubes, 25 per cent; other writing paper, 24 per cent; boxes and cartons, 24 per cent; bristols and bristol board, 24 per cent; wall paper, 23 per cent; papeteries (fancy writing paper), 20 per cent; sheeting and building paper, 15 per cent; paper bags, 17 per cent; overissue and old newspaper, 10 per cent; blotting paper, 11 per cent; envelopes, 5 per cent, and book paper, not coated, less than 1 per cent. The most important gains were in fiber insulating lath or board, with a 196 per cent increase over last year's figure, followed by greaseproof and waterproof, 32 per cent and paper towels and napkins, 17 per cent.

The month of June also witnessed a general slowing down in exports of paper and paper products, as compared with the preceding month and the corresponding month last year, being 14 per cent and 9 per cent lower, respectively. The only items that registered gains over the preceding month were book paper, not coated, greaseproof and waterproof paper, toilet paper, fiber insulating lath or board, cover paper, boxboard of paperboard and strawboard, and filing folders and office forms, with the first four mentioned also showing gains over the corresponding month last year.

United States imports of paper manufactures during the first half of the year amounted to $8,488,582, as against $8,834,753 in the corresponding period last year. The commodities imported in increasing quantities were greaseproof and waterproof paper which totaled $241,595 during the first six months as compared with $145,745 in 1929, or a 65 per cent increase; writing letter, drawing, etc., papers, which showed a 21 per cent increase over last year's imports for the first six months; cigarette paper, cigarette book and covers, which increased from $1,778,636 to $2,118,842, or 20 per cent, and leather board, test and wall board, for which is shown a 14 per cent increase over the first six months last year. The imports of items which decreased materially were the following: Paper boards, pulp boards and cardboard, 35 per cent; other wrapping paper, 32 per cent; duplex, decalcomania paper, unprinted, 31 per cent; surface coated paper, 25 per cent; paper boxes, 18 per cent; kraft wrapping, 13 per cent, and pulp boards in rolls, 13 per cent. Imports of newsprint fell 8 per cent as compared with the first six months last year.

The total imports of paper base stocks during the first six months amounted to $52,232,010, as compared with $54,891,663 for the same period last year, or a decrease of 4 per cent. There was a gain of 27 per cent in the imports of mechanically ground wood pulp and a 11 per cent decrease in bleached sulphite pulp, as compared with last year's figures for the first six months.

During the month of June, 1930, total imports of paper base stocks mounted to $5,839,664, which was $1,333,460 less than in the preceding month, and approximately 50 per cent less than in the corresponding month last year. There was also a decided drop in the imports of newsprint in June, falling $4,155,129 short of the preceding month's record, and almost an equal amount short of the corresponding month's record last year. Imports of paper manufactures also declined during this month, totaling only $918,682, as compared with $1,412,804 in May and $1,391,709 in June. 1929. The most notable decreases were in tissue, copying, etc., papers, pulp boards in rolls, paper boards, pulp boards and cardboard, wall paper, paper boxes, Kraft wrapping paper and surface coated paper.

NEW PULP MAKING PROCESS

An improved process of making pulp from yellow birch wood has been worked out at the New York State College of Forestry at Syracuse University, the results of which, if commercialized, may have an important effect on the manufacture of news print.

Probably any process that will make available more hardwood for pulp and paper manufacture will be gladly accepted by the industry. Especially would this be true in the manufacture of material upon which news papers are printed. Most of the

news print at present is made from spruce. There is a scarcity of spruce but there is plenty of yellow birch, a large supply of which is to be found in the Adirondack section of the State of New York where many pulp and paper plants are located.

The investigation carried on at the Forestry College covered the conversion of yellow birch into paper pulp by using liquid chlorine as a pulping agent. The investigators found that the birch wood when pulped by this process gave a product four times as strong as when pulped by the usual soda process commonly employed in the conversion of hardwoods. In addition to the factor of extraordinary strength it was found that the fibers were more flexible and bleached with much less difficulty than the ordinary soda wood pulp from the same wood. It is felt that the process has good commercial possibilities although certain economic phases remain to be worked out.

Olympic Forest Products Issues Gold Notes

Olympic Forest Products Company, offered through Blythe & Company, September 1, an issue of $750,000 three-year 6 per cent gold notes, due September 1, 1933, principal and semi-annual interest payable at First Dexter Horton National Bank of Seattle, Wash.

Capitalization is given as follows: Three year 6 per cent gold notes, authorized, $1,250,000, outstanding, $750,000; preferred stock, authorized, 40,000 shares, outstanding, 40,000; common stock, 110,588 shares, outstanding 94,118 shares.

The purpose of the note issue is that proceeds from the sale of the notes may reimburse the treasury of the company for capital expenditures and provide working capital. The company was incorporated January 25, 1930, and has recently completed a sulphite mill at Port Angeles, Wash., with a 175-ton capacity of bleached sulphite pulp daily.

The mill is built on a tract of approximately 160 acres of land, fronting tidewater. In addition to this a sawmill with an eight-hour shift capacity of 175,000 feet, is operated to cut at low cost a high quality raw material. The timber supply is assured by long-term contract with the Crescent Logging Company and the Merrill & Ring Lumber Co. A 1200-foot dock that can accommodate ocean trade is a notable feature of the plant.

The directorate of the company includes E. M. Mills, San Francisco, president; J. D. Zellerbach, San Francisco; Joseph Warren, Boston; Clyde B. Morgan, Boston; William E. Boeing and Elmer Todd, Seattle. Other principal stockholders are R. D. Merrill, Thomas D. Merrill, Joseph Irving, M. A. Arnold, J. H. Bloedel, Mark E. Reed, Robert Polson and Polson Logging Company.

Injured Paper Mill Workers Receive Awards

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., September 20, 1930—A number of injured paper mill workers received awards at a session of Compensation Court held here before Judge Richardson. Max Compo was granted $3,161.97 for loss of the use of his right hand resulting from injuries sustained while in the employ of the St. Regis Paper Company at Deferiet. An award of $2,304 was made to Wilbur Fullerton for injuries obtained while working at the Potsdam plant of the Racquette River Paper Company and the case was ordered closed. Elmer Carpenter, an employee of the Loomis Talc Corporation, was awarded compensation from July 26 to August 18 at the rate of $25 weekly and the case was closed.

Other awards made included $423.83 to Joseph H. Sanford for injuries received while working for the Sherman Paper Company and $432 to Fred White for loss of the use of a hand while working for the Dexter Sulphite Pulp and Paper Company. Johsua Jones was granted $886 for injuries sustained while working for the Emporium Forestry Company.

St. Clair Paper Mills Solicit Subscriptions

KALAMAZOO, Mich., September 20, 1930—Clarence A. Bradford, president of the defunct Bradford Paper Company and now practicing law in Detroit, is soliciting stockholders in the former Kalamazoo venture to join him in the formation of the Saint Clair Paper Mills, which has temporary offices at 2949 West Grand Boulevard, Detroit.

This solicitation has been conducted by mail so far. One communication announces that Clarence A. Bradford is president of the new concern, with Joseph Webster, Detroit, secretary; J. H. Stark, vice-president; M. Johnson, operating vice-president. Mr. Stark is president of the American Paper Box Company and Johnson former superintendent at both the King Paper Company and the Rex Paper Company.

The board of directors, in addition to the above, will include J. G. Fox, of this city; Emil Kellner, formerly with the Bryant Paper Company; Guy Harrison Wing, public accountant and two bankers, names to be announced later.

Addressing the stockholders of the Bradford Paper Company, C. A. Bradford writes:

"The writer has always felt that it was to some extent at least, due to his connection with the Bradford Paper Company, that you invested in that company. It was common knowledge that with the Bradford Paper Company, I did not have control of the situation, and that we were crowded into a corner where it was necessary for us to choose one of two evils to save what we could.

"Through this unfortunate series of circumstances, that investment did not turn out as you and I had a right to expect. I have been busy for the past two years developing a proposition whereby we could save our investment and without a doubt be better for us than the original company.

"It is my opinion that this problem has been solved. We have profited by our experiences and a really safe and sane plan has been developed,—one whereby every possible protection has been provided.

"To this end the St. Clair Paper Mills has been organized and incorporated. In a few days you will hear direct from the company with more details of the plan that has been worked out for making good your investment in the Bradford Paper Company."

The second letter, is from J. Webster, secretary of the St. Clair Paper Mills. Referring to the failure of the Bradford Paper Company, consequent loss to stockholders and plans for recovery, the letter adds:

"We have negotiations for financing whereby the interest of the original investors in Bradford Paper Company may be advanced. You were aware when you first cast your lot with this company that basically the proposition was sound, and that only through an unfortunate series of circumstances the investment did not turn out as you had a right to expect.

"You will be glad to know that Clarence Bradford has (with certain conditions) depositied certificates for as many shares of the St. Clair Paper Mills class "B" stock as you had in the Bradford Paper Company.

"You will soon receive more information as to what we are doing about financing."

James Maclaren Install Chemipulp Process

WATERTOWN, N. Y., September 21, 1930—The tenth Chemipulp Process installation has just started into operation at the new mill of James Maclaren Company, Ltd. at Buckingham, Que. This plant is a modern news print mill and was designed by Hardy S. Ferguson & Co., consulting engineers, New York.

Approximately half of the Chemipulp installations are in mills producing wholly or part high grade bleached sulphite pulp and the remainder are producing strong unbleached sulphite fibers.

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Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

Apparatus for Determination of Viscosity of Cellulose in Cuproammonium Solution *

By Fritz Brauns[1]

In judging the suitability of cellulose for the manufacture of artificial silk, pyroxylin varnishes and explosives, the determination of its viscosity is very important. In the last few years numerous attempts to create standard methods for its determination, both amongst producers and users, have been made.

Several Methods of Determination

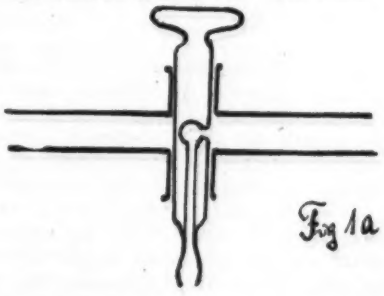
There are several methods for the determination of the viscosity of cellulose. The pulp can be converted into viscose in the manner of the manufacture of viscose rayon and the viscosity has been determined in a solution of eight per cent cellulose by the ball fall method or in a solution of one per cent by using the caterpillar viscosimeter of Ost. Although this method is sufficient for the manufacturer of viscose rayon it has the disadvantage of requiring several hours and therefore it is not suitable for the control of the manufacture of pulp and it does not give the viscosity of the original pulp, but one of a more or less ripened alkali cellulose. Because the alkali cellulose is very sensitive the viscosity is dependent on the working manner and also of the time.

Studied in Several Industries

The cuproammonium viscosity method has been used in studying the nature of cellulose materials for the manufacture of explosives, artificial silk, pyroxylin varnishes and in the textile industry. Clibbens and Geake[2] of the British Textile Institute state the measurement of the rate of flow of a solution of cotton in cuproammonium offers the most generally useful method for detecting loss of strength caused by chemical attack of cellulose in the bleaching and finishing of cotton textiles. In the manufacture of nitrated cellulose Small[3] found, that there is a simple relation between the viscosity of the original cellulose in cuproammonium and the viscosity of the nitrated cellulose in suitable solvents. Clibbens and Ridge[4] have also shown that the fluidity of cotton in cuproammonium increases uniformly with the decrease in tensile strength when the cotton is subjected to various forms of chemical attack, such as alkaline and neutral bleaching. The standard method for the determination of viscosity of cellulose, worked out by the Committee on the Viscosity of Cellulose, Division of Cellulose Chemistry, American Chemical Society, gives very good results, when the research conditions are exactly observed. A special apparatus is demanded for this method, because it is of great importance to exclude every trace of oxygen. Following, a simple apparatus is described for the determination of viscosity of cellulose in cuproammonium.

The Apparatus

The apparatus consists of two parts, the vessel (A) (Fig. 1) in which the solution of the cellulose is manufactured, and the viscosimeter (B) (Fig. 2). A consists of a cylindrical thick glass vessel with a content of 100 cc and with a cc-scale. The bottom ends in a tube which tapers at the end and has a three ways valve (a) and the ground (b). The vessel is closed by



a rubber or glass ground stopper, which is supplied with a three ways glass valve (c) where the main channel is connected with the side channel (Fig. 1a). The stopper is held by a clamp.

The viscosimeter has the form of a viscosimeter by Ost with a marked content of 20 cc at 20 deg. C. The longer part ends in a ground (e), in which the ground (b) of the vessel A fits, and a little below this there is a glass tube with an ordinary glass valve (f). The other part of the viscosimeter carries, connected by a ground, the glass tube (g) with the three ways valve (h) and the tube (i), which is connected with the nitrogen cylinder.

To use the viscosimeter the vessel A is set with its ground (a) on the ground (e) of the viscosimeter (Fig. 3) and the glass valves a, c and h are connected by means of rubber tubes and the T-tube, carrying the glass valves (k) and (l). The prepared sample of pulp is put into the vessel A which is closed tight by the stopper. By means of suitable positions of the glass valves the air is driven out by a stream of nitrogen which is free of the least trace of oxygen. This takes from 10-15 minutes. Then the valves (f) and (k) are closed and through the valve (c) the cuproammonium solution is poured in by means of a burette, whose outlet tapers to a long point. During this time a slow stream of nitrogen prevents the entrance of

* Die Kunstreide Verlag H. Jentgen, Berlin.
[1] Pulp Chemist, Mannheim, Germany.
[2] Journ. Textile Inst. 19. T 77.1928.
[3] Ind. engin. Chem 17. No. 5 515.1925.
[4] Journ. Textile Inst. 19. T 389. 1928.

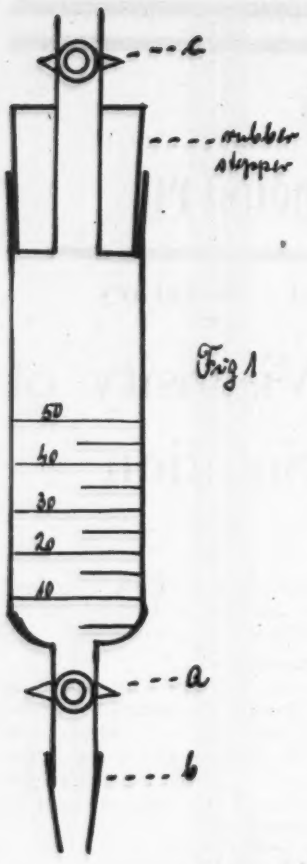


Fig 1

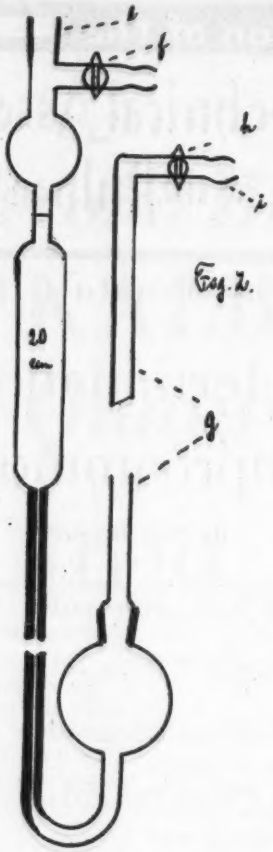


Fig. 2.

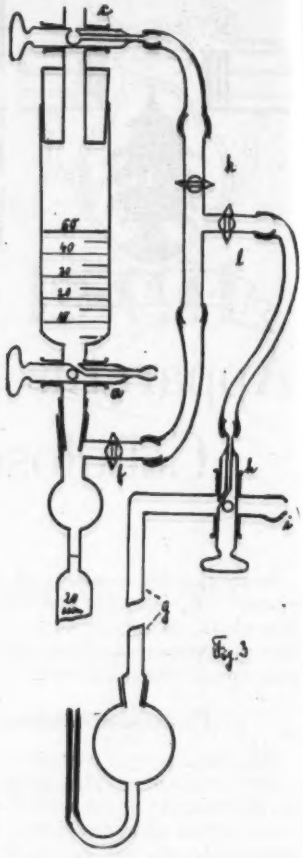


Fig. 3

air into the apparatus by opening the valuves h, l and k. After closing the valves c, f and k the vessel A is taken down and shaken till the cellulose is completely dissolved. If the work has been done properly this takes 2-3 minutes. During this time a slow stream of nitrogen passes through the viscosimeter. When the cellulose is completely dissolved the vessel A is again put on the viscosimeter, which is dipped into a water bath of 20 deg. C. and protected against direct day light. The valve (k) is connected with (c) and the air is driven out of the connecting rubber tube. The outlet of the glass valve (a) is closed by a rubber cap, made from a piece of rubber tube and glass rod. Now the glass valve (h) and (l) are closed, the valve (a) is opened and by opening the valves f, k and c the viscosimeter is connected with the upper chamber of the vessel A and the solution flows into the viscosimeter. When exactly 25 cc are in the viscosimeter the glass valves (a) and (k) are closed and when the solution is 20 deg. C. it is allowed to flow into the viscosimeter by means of the glass valves (h) and (a). The time measured in seconds by a stop watch, which is needed for 20 cc cellulose solution at 20 deg. C. to flow through the viscosimeter, divided by the water worth or by the time which is needed for 20 cc cuproammonium solution at 20 deg. C. is the viscosity of the cellulose. If it is desired that the solution is to flow once more, it is pressed back from the lower ball into the viscosimeter by closing the glass valve (f), opening the glass valve (h) and removing the rubber cap of (a). When the solution has passed the upper mark, the rubber cap is put on (a) and the solution can flow.

The apparatus is especially suited for the determination of the viscosity in the control of the department, because the experiment takes only 25-30 minutes.

TAPPI Notes

P. E. Joslyn for some time with the Beaver Wood Fibre Company at Thorold, Ontario has been transferred to the Certain-teed Products Corporation at York, Pa.

J. F. Ohlson has gone with the Oxford Miami Paper Company at West Carrollton, Ohio after having been with the International Paper Company at Dalhousie, for the past year.

V. S. Denison and H. O. Bing have left the Paper and Textile Machinery Company of Sandusky, Ohio and have joined the staff of the Beloit Iron Works of Beloit, Wis.

Gust Johanson for the past several months has been in Sweden but has just returned and gone to the West Coast where he is now employed by the Schaffer Box Company of Tacoma, Wash. Mr. Johanson was formerly employed by Celulosa Cubana of Tuinucu, Cuba.

S. C. Pool, for some time with the Grays Harbor Pulp and Paper Company at Hoquiam, Wash., has accepted a position in the chemical products laboratory of the Eastman Kodak Company at Rochester, N. Y.

James B. Clarke for the past several months with the New York Division of the National Aniline and Chemical Company has just been transferred to the Chicago plant.

B. T. McBain, well known pulp and paper specialist, has closed his offices at Portland, Oregon, and is in New York for the present.

A. W. Pesch formerly of the Falls Manufacturing Company of Oconto Falls, Wis., is now with the Southern Kraft Corporation, a subsidiary of International, at Camden, Arkansas.

E. W. G. Cooper formerly of the Don Valley Paper Mills of Toronto, Ont., is now with the Racquette River Paper Company in Potsdam, N. Y.

The Manufacture of Carbon Paper*

By J. Oddon

Base Paper for Typewriter Carbon

General

Base paper for typewriter carbon is one of the most difficult papers to make. Manufacturers of carbon paper, who are to be found chiefly in England, require numerous qualities in the base paper. Above all, it should be absolutely free from pin holes, and the formation should be as even as possible. Moreover, the weight and thickness should be perfectly uniform. Another essential quality is strength, which is evidently quite logical, as the paper, after coating, will have to stand relatively hard blows when in use on the typewriter. A number of tests of carbon base paper have given the following results:

Kind of paper	Weight per square meter grams	Tensile strength in kilos	Breaking length meters	Elongation per cent
No. 2 Wove	18.5	1.875	6730	1.6
	19	1.925	6780	1.0
No. 1 Wove	12	1.270	7060	1.6
	11.5	1.250	7180	1.6
No. 1 Wove	14	1.635	7790	1.8
	15	1.595	7480	1.8

These results may be summed up in the statement that of all grades of tissue papers, with the single exception of insulating paper for electric cables, carbon base paper is the one requiring the greatest tensile strength. A good carbon base paper must be smooth and soft to the touch, strong, free from creases, wrinkles or blisters, and as one side of the paper is to be coated with an emulsion, it is particularly important that it should be free from pin holes. As far as the "softness" of the paper is concerned, we shall see later that it is easily obtained by the use of glycerine.

Manufacture

Scrupulous cleanliness must be observed at all stages in the preparation of the pulp.

High grade hemp, having a high fiber strength, beating quality and felting power, is used almost exclusively as raw material, generally in the form of first grade Italian hemp or as new ropes. When Italian hemp is used, it is cooked with 15 to 17% of quicklime and 1 to 3% of soda ash. After cooking the material must be subjected to a very thorough washing, lasting at least 3 hours.

Very seldom, lower grades are used, or even small quantities of linen rags, tarred cordage or even sulphite pulp.

Another material which is sometimes used in admixture with hemp and which gives very good results, is white ramie, which is used chiefly for banknote paper. But this material is not often used because it is much more expensive than hemp (about twice as much). It is true that carbon base paper is always sold at a very high price, so that there is a sufficient margin of profit to permit the use of such an expensive raw material. The retail price of typewriter carbon paper is approximately 50 times that of the base paper, 100 sheets of 12-gram per meter carbon, 21 by 31 cm., selling at 10 francs, which comes to the fantastic price of 128 francs per kilo (or $2.28 a pound at the present rate of exchange).

Ramie, which has long, silky fibers, ranks first amongst fibrous materials as regards strength, ease of beating and felting power. When the pulp has been highly beaten, it is almost impossible to distinguish between ramie and hemp fibers. Excellent results are obtained with ramie in the manufacture of carbon paper, as it gives very high strength and perfect formation. The following table gives the properties of hemp and ramie fibers.

	Ramie	Hemp
Fiber length	40 mm.	22 mm.
Fiber diameter	0.02 mm.	0.022 mm.
Felting power (length:diameter)	2000	1000
Moisture content of air-dry fiber	6.52 per cent	4.20- 5.70 per cent
Maximum hygroscopic moisture content	18.15 per cent	13.90-24 per cent
Specific gravity of fibers	1.51-1.52	1.48
Ash	5.63 per cent	0.82 per cent (Italian)

After the cooking, which must be conducted very carefully, the pulp should be subjected to prolonged washing in the washing beater, and again during defibration. Bleaching also must be conducted very carefully, in order to avoid "burning" the fibers which would impair the strength of the paper. The amount of bleaching powder used varies from 8 to 11 per cent. This operation must be followed by a very thorough washing.

Beating

The beating of stock for carbon base paper is evidently a very delicate operation and requires considerable experience; it should be carried out slowly. A very important point is to make sure that the stock has been thoroughly washed for at least two hours before letting down the roll. The pulp should be beaten very wet and in such a way as to keep the fibers relatively long. Apart from the time, the other beating conditions are about the same as for cigarette paper weighing 13 grams per square meter. The consistency in the beater should be about 5 per cent. All lumps must be perfectly eliminated.

Running on the Paper Machine

Only very pure and well filtered water should be used. The paper machine should be provided with large reversible rifflers, and the screens should have slots 0.4 mm. (0.016 inch) wide. A 60 by 180 mesh wire should be used. A slow shake and very uniform pressure at the presses are required.

The manufacture of this grade naturally requires numerous precautions, among which the following should be mentioned. It as essential that the presses be heavily weighted. The dryer felts should be well stretched, and the wire should be thoroughly cleaned with spirits of turpentine so as to avoid all stains and holes in the sheet, which, even though they were not numerous, would cause rejection of the paper. Care should be taken to avoid foam spots, crushing and variations in the weight or thickness of the sheet. Drying is another delicate operation, as all cockling must be avoided; yet the first dryer should be fairly hot, and the last upper dryer should be extremely hot.

It is the high pressure at the presses and the high felt tension that gives carbon base papers their characteristic "look through" and peculiar "slippery" feel. These properties can be still further enhanced by the use of glycerine; 10 liters of glycerine are diluted in about 100 liters of water and incorporated in the paper at the wet presses. The simplest way of accomplishing this is to place a rectangular tank above the press, having a strip of felt rubbing against the top press roll along its whole length. The glycerine solution is placed in another tank, at a higher level than the first and connected to the latter by means of a pipe with a valve by which the rate of flow can be regulated. The solution soaks into the felt, which in turn wets the press roll, thus incorporating the glycerine into the paper. A pan is placed under the lower press roll to catch the drippings, which contain a small amount of glycerine and which can replace part of the water used to dilute the glycerine. More uniform results can be obtained by using two rolls, one of which is partly immersed in the glycerine tank, while the other is in contact with it and also with the press roll, which drives it by friction.

Carbon Paper

Control, Color and Emulsion

Carbon base papers are generally made white or cream colored.

* Translated from Le Papier, xxxii, 875-880, August, 1929, by A. Papineau-Couture.

the latter being obtained by the use of unbleached pulp. Blueish papers are also sometimes used for brown or blue carbon paper. In the case of paper that is colored before coating, it is particularly important that all lumps of stock be removed as such lumps would be colored more deeply than the rest of the stock and the coating would not be even over the whole surface of the sheet. The same is true if the paper is not perfectly flat and smooth and free from cockles, blisters, holes or creases. In other words, in order to obtain a proper coating, the base paper must be absolutely perfect; and as this is practically impossible with the paper as it comes off the machine, the rolls are rewound and examined very carefully at the same time, all defective parts being removed.

As the mills making the base paper do not generally coat it, the rolls are very carefully packed in paraffined kraft paper, then in tissue paper, and finally in corrugated paper. The usual widths are 38 and 47 cm., and it is very seldom that it is sold in sheets.

The following emulsion gives very good results for blue carbon: Pure blue 200 grams, Methyl violet 25 grams, Deep paper black 10 grams, Alcohol 250 grams, Water 8 liters, Glycerine 50 grams.

The coating operation is an extremely delicate one and requires considerable experience. By varying the proportions of black, blue and violet, nearly all the shades of carbon paper ordinarily found on the market can be obtained. It may be mentioned once more that the setting of the emulsion depends above all on the properties of the base paper, which should be perfectly flat and smooth, this being the chief reason for treating it with glycerine. In a word, the quality of the carbon paper depends mainly on that of the base paper.

As regards the coating, the chief difficulty lies in the fact that absorption must be absolutely uniform.

Standard for Abrasive Wheels

A revised edition of the American Standard for the use, care, and protection of abrasive wheels has just been approved by the Standards Council of the American Standards Association.

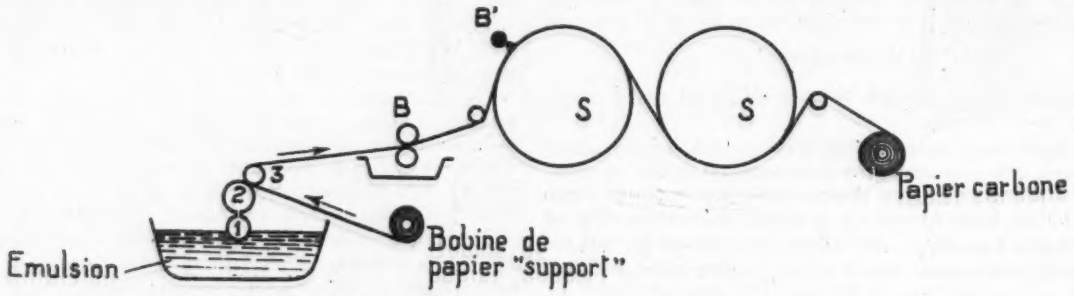
The original edition of the code, approved in 1926, was recognized as the authoritative publication on the subject and was widely adopted. Progress in the grinding wheel industry during the past four years has, however, made the revised edition necessary.

In 1926, the maximum speed for the vast majority of grinding wheels was 6,000 to 6,500 peripheral feet per minute. The present code provides for maximum speeds varying from 4,500 to 16,000 feet per minute, these higher speeds having been made possible by the use of synthetic resin and rubber bonded wheels.

The new code also provides for the use of steel castings for hoods for high speed wheels, the suitability of such material for this purpose having been determined by actual destruction tests.

According to the introduction to the code, "The importance of proper wheels, correct mounting, suitable machines, careful operation and proper speed are recognized as means of preventing wheel breakage, but as all of these things are dependent on human control, it is considered essential that some form of mechanical guard be employed at all times." The code includes requirements for types of protection devices; storage and inspection of wheels; general machine requirements; protection hoods; work rests; protection or cup, cylinder, and sectional when consisting of abrasive particles held together by artificial ring wheels; flanges; mounting; speed; operating rules and general data. It applies to abrasive wheels (a power-driven or natural mineral or organic bonds) three inches and larger in diameter, operating at speeds exceeding 2,000 surface feet per minute.

The revised code was submitted to the American Standards Association by the joint sponsors, the Grinding Wheel Manufacturers Association of the United States and Canada and the International Association of Industrial Accident Boards and Commissions. The technical committee which approved the code and recommended its adoption to the sponsors included in its membership representatives of the U. S. Department of Labor; U. S. Bureau of Standards; U. S. Public Health Service; International Association of Industrial Accident Boards and Commissions; Departments of Labor and Industry of Ohio, Wisconsin, Massachusetts, New Jersey, and Pennsylvania; the Grinding Wheel Manufacturers Association of the United States and Canada; National Machine Tool Builders Association; American Foundrymen's Association; National Founder's Association; National Metal Trades Association; National Association of Mutual Casualty Companies; National Bureau of Casualty and Surety Underwriters; National Safety Council; American Society of Mechanical Engineers; Society of Automotive Engineers; International Association of Machinists, and Metal Polishers, Buffers and Platers of North America.



SIMPLE MACHINE FOR COATING CARBON PAPER

A very simple machine is generally used, consisting, as shown in the diagram, of one or two dryer rolls, and the three rolls 1, 2, 3. The copper roll is in the tank containing the emulsion and partly immersed in the latter. The sheet passes between rolls 3 and 2 (the latter being rubber-covered) and is therefore coated on one side only. At B there is a set of very soft brushes and scrapers to distribute the coating evenly over the sheet. It is also preferable to have a pair of press rolls at B to remove the excess liquid from the paper. The dried paper is cut into sheets of the required size, the more usual ones being 21 x 32.5 cm., 21 x 31 cm. and 21x 27 cm.

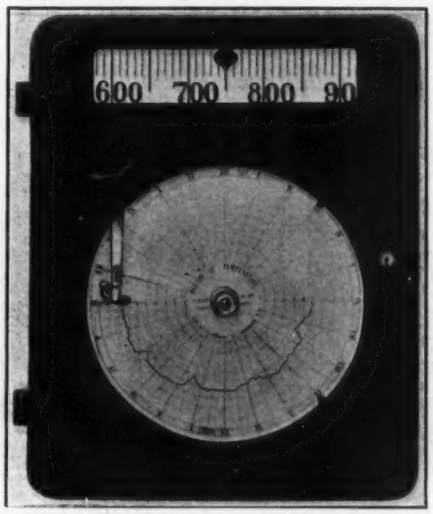
Raw Material Shortage in Russia

WASHINGTON, D. C., September 24, 1930.—For some time references to a shortage of raw materials for paper making have appeared in the Soviet press according to reports received here. News print production for the month of July, according to "La Industrializatsiu" amounted to only 78.9 per cent of capacity, the same article alleging that the unsatisfactory supply of raw materials at the paper mills is causing lengthy shut downs of machinery. The shortage of raw materials for the mills is particularly interesting in view of the shipments of pulpwood to the United States and various European countries.

A New Pyrometer

A very novel instrument for measuring and recording temperature has been recently developed by the Uehling Instrument Company, 114 Vesper St., Paterson, New Jersey. This instrument, which is known as the "Self-Contact" Potentiometer Pyrometer was primarily designed for measuring high temperatures as experienced in the iron, steel and ceramic industries. It lends itself equally well, however, to the measuring and recording of any temperatures where a high degree of accuracy is desired. Either a thermo-couple or an electric resistance bulb may be used as the temperature element.

The "Self-Contact" Potentiometer Pyrometer entirely eliminates the use of depressor bars, cam mechanisms, and continuously operating motors. This is made possible by a patented method which assures definite and reliable contact between the needle of a gal-



SELF-CONTACT POTENTIOMETER PYROMETER.

vanometer and stationary contact pieces, without in any way employing auxiliary mechanical devices which in one way or another conflict with the indicating needle.

Although the "Self-Contact" Recorder retains all the advantages of the potentiometer, the novel contact method permits placing the galvanometer apart, and at almost any distance from the Recorder. This makes possible a very simple and rugged recorder construction that will withstand rough plant conditions.

The recorder, as illustrated, is actuated by a galvanometer that may be placed in any desired location, quite apart from the Recorder. A single galvanometer will actuate as many as four Recorders, eacn Recorder in a different location, each measuring a different temperature, and if desired, each having an entirely different calibration.

The entire recording mechanism is fastened to a frame which is hinged to the case. Everything may, therefore, be opened up to permit accessibility to all parts of the apparatus. A small motor operates only as and when necessary to adjust the pen to the proper temperature reading on a clock driven chart. It is also in geared connection with two pulleys over which a translucent endless, belt, about 2 ft. long is placed. The belt is calibrated in temperature units and will move in direct proportion to the pen mechanism but at a greater speed. This permits a very open and legible scale which moves in back of a pointer fastened to the door. The legibility of the figures, the exceptional length of the scale, and the fact that it is illuminated from the rear, make it very easily read under all conditions at a distance of 75 ft. or more. This is a very important feature which, due to the fact that the galvanometer does not form part of the recording mechanism, permits placing the recorder where it will most assist the operating staff.

Kreuger & Toll Research Laboratory

The Swedish Pulp Company, the large combine in the Swedish pulp industry, will shortly organize a central testing and research laboratory for all its sixteen mills.

Among the chief objects of this new institution will be the establishment of a centralized technical quality control of the whole production with a view to supporting the individual mills in their efforts to produce a pulp of highest possible quality. Further it will become a center for all their investigational and experimental work in the pulp field.

The management of the Swedish Pulp Company hopes that this important complement to the mills will greatly facilitate the foundation and development of a closer technical relation with their numerous customers all over the world, whom they are desirous to render any possible service.

Mr. Gösta A. Hall has been appointed manager of the new Central Laboratory.

The following mills belong to the Swedish pulp combine, viz. Bergvik, Björkmäs, Essvik, Franö, Kramfors, Lulea, Matfors, Munksund, Nyhamn, Obbola, Sandarna Skönvik Sund, Svartvik, Torpshammar and Ytterstfors. Their annual production exceeds 400,000 long tons of dry chemical pulp and 200,000 tons of wet mechanical pulp. In addition to this, the new mill at Östrand, now under construction, will have a yearly capacity of 100,000 tons of chemical pulp.

New TAPPI Members

J. A. Bardsley, engineer, Canada Power and Paper Corporation, Three Rivers, P. Q.

A. O. Bowness, technical supervisor, E. B. Eddy Company Ltd., Hull, P. Q.

J. D. Hull, consulting engineer, Seattle, Wash.

William Landes, chemist, Castanea Paper Company, Johnsonburg, Pa.

Nils Sandman, chief chemist, Insulite Company of Finland, O. Y,. Karhula, Finland.

F. H. Thurber, associate chemist, Paper Section, Bureau of Standards, Washington, D. C.

Hans Unden, superintendent, Nensjo Cellulosa A/B, Sprangsviken, Sweden.

H. A. Vernet, sales engineer, Oliver United Filters Inc., San Francisco, Calif.

W. L. Vignes, chief chemist, Southern Kraft Corporation, Moss Point, Miss.

Eastern Paper Mill Seeks Georgia Pine

[FROM OUR REGULAR CORRESPONDENT]

ATLANTA, Ga., September 15, 1930.—The State Forestry Department said Wednesday that an inquiry had been received from a large New England paper manufacturer for 30,000 cords of slash pine annually to be used in the plant.

The company desired to make a contract for several years and said the product should come from a section near a port for ocean-going vessels in order that the shipments could be made north by water.

This is one of the largest inquiries ever received for Georgia pine to be used in paper manufacture, the department said, and added that every effort would be used to supply the demand.

A. D. Cook Inc. Opens Grand Rapids Office

GRAND RAPIDS, Mich., September 22, 1930.—A. D. Cook, Inc., manufacturer of deep-well pumps and well supplies at Lawrenceburg, Ind., has opened a Michigan office in Grand Rapids. Mr. James R. Hamilton is the sales representative in charge and Mr. H. B. Allen Sickel, formerly vice president and chief engineer of the Layne-Ohio Company, is the consulting engineer and superintendent of gravel-packed well installations.

A Study of Old Newspapers

Through the cooperation of the New York Public Library, the Bureau of Standards has been able to make a study of old newspapers in reference to their state of preservation. The transitions in usage of the various paper-making fibers are well reflected in news print papers, therefore papers used for this purpose are a valuable medium for obtaining information on the natural aging properties of the various kinds of fibers.

At the request of the bureau, the New York Public Library submitted test specimens taken from newspapers in their files dating from 1830 to 1895. Ninteen different newspapers were examined, and sufficient determinations of the kind of fibers present were made to find the various transitions in usage of fibers, and to find the relation of these transitions to the aging quality of the papers.

The papers were first graded jointly by three persons, with consideration of color and strength. Five different grades were observed, therefore the best grade was designated No. 1 and the poorest grade No. 5, the others falling in order between these grades. The No. 1 papers were in excellent condition, showing little or no evidence of deterioration in color and strength. The papers of No. 5 grade were badly deteriorated. They had a deep brown color and were very weak, usually breaking with one fold. After the papers were graded, the kinds of fibers present were determined, and the condition of the fibers was noted. Following is a summary of the results of these examinations.

To 1865, the papers are composed of chemically-purified rag fibers and are generally in excellent condition. Of the 28 specimens of this group examined, 13 were rated No. 1 in color and strength, 8 were rated No. 1 in strength and No. 2 in color, and the remaining 7 were rated variously Nos. 2 to 3 as to color and strength.

From 1865 to 1873, the papers are generally composed of chemically-purified fibers from rags, wood, straw and esparto grass, usually mixed, and are generally in good condition. This group consisted of 15 specimens, 10 of which were rated No. 1 in both color and strength. Of the No. 1 papers, 7 consisted of various rag-straw or rag-esparto mixtures, 1 was composed largely of wood and straw with a small admixture of rag, and 2 were composed entirely of esparto or straw. Differentiation between esparto and straw is sometimes difficult, and while the fibers of these two papers appeared to be esparto, the identification of the source of the fibers was not positive. The remaining five papers had fiber mixtures similar to the other papers of this group, and their ratings in color and strength ranged from 2 to 4. Papers in the group extended to the year 1881.

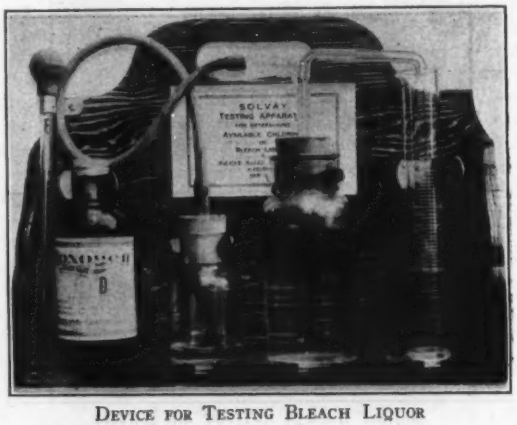
The remainder of the specimens, 42 in number, all contained ground wood fiber. The earliest date of papers in which ground wood was found is 1868, but it was not generally present in papers dated prior to 1873. The papers of this group are, with a few exceptions, badly deteriorated, generally having a deep brown color and crumbling to pieces with very little handling. Only one paper was rated No. 1 in color and strength, and it was composed largely of either straw or esparto grass fibers with a small proportion of ground wood fibers. Five papers were rated No. 2 and consisted of various mixtures of the chemically-purified fibers, such as found in the previous group, mixed with ground wood fibers. The remainder of the papers were with few exceptions rated No. 4 or 5. The use of chemically-purified fibers from rags, straw, esparto and wood, mixed with the crude ground wood fibers apparently continued until around 1890, at which time occurred the transition to the modern type of news print, consisting of approximately 30 per cent of unbleached wood sulphite fibers and 70 per cent of ground wood fiber.

Aside from their historical interest, these data give additional evidence of the superiority of well-purified fibers over crude or partially-refined fibers. The permanence of these papers that are composed of highly-refined fibers, whether from rags, straw, esparto grass or wood, is very good, but starting with the introduction of the crude ground wood fibers, the papers are generally badly deteriorated, whether the ground wood fibers are associated with these highly refined fibers, or with only partially refined fibers such as unbleached sulphite wood fibers. These findings are further evidence that the processing of fibers is a more important factor in their aging quality than is their source.

Handy Device for Testing Bleach Liquor

The term bleach liquor as ordinarily used in the pulp and paper mill means a water solution of calcium hypochlorite. It is obtained either by the action of chlorine on milk of lime or by the dissolution of bleaching powder in water.

Under suitable conditions the calcium hypochlorite gives up its oxygen in the nascent form in the presence of substances that can be oxidized. Fortunately the bleach acts first on the lignins and coloring matter; but if there is much bleach left after the easily oxidizable substances are destroyed, its action on the cellulose itself may be severe. On the other hand it is practically impossible to get a white pulp without using a slight excess of bleach. Only by careful control of the entire bleaching operation can the best results be obtained.



DEVICE FOR TESTING BLEACH LIQUOR

There are in use various methods for the preparation of bleach liquor, but all methods are subject to more or less variation from time to time in strength of the finished liquor. It is for this reason that the careful bleacher makes sure of the strength of his bleach before he uses it.

Realizing the need for a reliable routine method for testing bleach liquors, chemists connected with the laboratories of The Solvay Process Company set about to develop a simple method for making these tests which could be easily learned and used by anybody. The result is a very neat little device which determines the "available chlorine" (oxidizing) strength of the bleach liquor by measuring the volume of oxygen evolved in a reaction between the hypochloride and hydrogen peroxide. The only reagent used in making the test is ordinary household hydrogen peroxide.

The apparatus is so designed that the liberated oxygen is measured by the displaced water in an ordinary graduated cylinder and the strength of the bleach in terms of "available chlorine" is found by merely noting the quantity of water in the cylinder. Only about 10 cubic centimeters of hydrogen peroxide are used to make the test, and less than two minutes are required for the complete operation.

The bleach testing outfit is fitted into a well finished rack and comes complete with instruction cards and a convenient carrying case. The outfits are furnished by the maker at cost. Anyone who is interested may obtain further details from Solvay representatives, or direct from the main office of Solvay Sales Corporation at 40 Rector Street, New York City.

Currrent Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts and Bibliography of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

For photostatic copies of articles appearing in the Abstract Section, address the chairman of the Abstracts Committee, Dr. Clarence J. West, National Research Council, 21st and B Streets, Washington, D. C. The Charge for this service is 25 cents per page. Copies of United States patents may be obtained from the U. S. Patent Office, Washington, D. C., for 10 cents each. Send currency not stamps.

Wire Guide for Paper Machines. Haindl'sche Papierfabriken Ges. Eng. pat. 304,671.—An apparatus for regulating the running of the wire cloth in paper machines and for preventing the warp wires thereof from catching the suction box covering, the regulating roll is operated by a jet of water which, by the lateral movement of the wire cloth, is allowed to impinge on an impact surface and thus actuate the control member of a hydraulic regulating device to admit liquid under pressure to one side or the other of a power piston, by which the regulating roll is moved. Abutments limit the stroke of the regulating roll and a cock inserted in one of the pipes leading to the power cylinder is used to vary the rate of movement of the power piston.—A.P.-C.

Suction Roll. W. H. Millspaugh. U. S. pat. 1,700,442, Jan. 29, 1929.—The roll is supported at each end on comparatively large, antifrictionally mounted rollers having broad treads, and is free from contact with other bearing surfaces.—A.P.-C.

Suction Box. G. J. Manson. U. S. pat. 1,703,010, Feb. 19, 1929.—The suction box has a slotted metal top, the whole of the exposed surface of which is completely covered with a surface layer of enamel.—A.P.-C.

Fourdrinier Paper Machine. F. W. Vickery. Eng. pat. 290,-326, Jan. 12, 1927.—The friction between the wire or felt and the suction box is lessened by maintaining a fluid layer (such as may be supplied by a jet of water) between the ends of the suction box and the edges of the wire or felt.—A.P.-C.

Determination of Chlorine Consumption Number (Sieber Number) of Sulphite Celluloses. W. Humm. Papierfabr. 27, 387-389 (1929). The Sieber number is the ratio of chlorine consumed to that originally present (expressed as a percentage) when 5 grams of dry cellulose are treated with a bleaching powder solution of standard chlorine and alkali concentrations under controlled conditions. Within narrow limits (*e.g.*, 4.8 to 5.3 grams), the weight of cellulose taken does not materially affect the Sieber number, but beyond these limits too small a weight gives too high, and too large a weight too low, values. The suitability of the measurement for classifying sulphite celluloses is discussed.—C. J. W.

Critical Study of Methods of Measuring the Bulk of Paper. F. T. Carson. U. S. Bureau of Standards. Paper Trade J. 89, No. 15, 55-61 (Oct. 10, 1929). As a result of a study of the methods commonly used for measuring the property of bulk or voluminousness of paper, a standard method is proposed for measuring bulk. It was found that the different pressures used in the variable-pressure type of apparatus and the use of an insufficient number of sheets in the case of measurements with thickness gages are chiefly responsible for the diversity of results ordinarily obtained. As a result of comparative tests made on different types of apparatus and at various pressures, it was found possible to select procedures for the two most commonly used measuring devices so as to bring them into substantial agreement with each other and with the bulk actually obtaining in bound volumes. A standard procedure is recommended which permits either the measurement of a pack of paper 0.1 inch or more in thickness with a thickness gage of standard type, or the measurement of a 1-inch pack under a pressure of 5 lbs. per sq. in. by means of a pressure bulker. It is recommended that the results be expressed as (a) bulking thickness, or the thickness in hundredths of an inch of a 100-sheet pack; and (b) specific bulk, or the ratio of bulking thickness to the standard ream weight of the paper measured. —A.P.-C.

Method and Apparatus for Removing Knots from Mechanical and Chemical Wood Pulp. A. Christian Andersen and Arne Schie. U. S. pat. 1,718,399, June 25, 1929.—The strainer drum is built up of rings supported on longitudinal ribs and is connected to a sleeve on the shaft by means of a spider. The ends or heads of the straining drum do not rotate with the shaft, but are mounted on sleeves supported by means of ball or roller bearings on eccentric pivots forming part of the shaft. Between the outer edge of the head and the end of the strainer drum is a ring of rubber or other similar material, so that the rotations of the shaft give a rapid oscillating motion and at the same time cause a slow rotation of the strainer. On the inside surface of the drum are "driver" strips, parallel to the axis, which take the knots, etc., and deliver them into a gutter near the top of the drum, from which they are delivered into a second drum, smaller than the first and coaxial with it. The stock is fed inside the screen from a constant-level box, arranged so as to keep the screen and surrounding casing a little more than three-quarters full. If the machine is to be used as a screen instead of a knotter instead of building up the screen drum of a series of rings, it may be covered with perforated screen plates or with wire fabric, and the stock may be made to flow inwards instead of outwards.—A. P.-C.

Pulp Screen. Harold D. Wells. U. S. pat. 1,722,874, July 30, 1929.—The screen is carried by a skeleton cylindrical frame, which is supported at its ends by inwardly projecting flanges integral with the castings constituting the ends of the screen casing. Inside the screen is mounted a rotor consisting of a hollow perforated drum, which tapers towards the stock-inlet end. Blades parallel to the axis are secured to the outer surface of the rotor; they lie directly against the rotor at the larger end of the latter, and are supported on a spider at the smaller end. Specially designed stuffing boxes are provided for the rotor shaft.—A. P.-C.

Method and Means for Controlling the Moisture Content of Paper. Herbert L. Bone assignor to Atlantic Precision Instrument Co. U. S. pat. 1,722,655, July 30, 1929.—This is one of the patents covering certain aspects of the use of radio circuits for indicating, recording and controlling the moisture content of paper on the machine. Instead, however, of incorporating the moisture-sensitive element as part of the dielectric of the condenser constituting the tuning element of a receiving circuit (U. S. pats. 1,708,073 and 1,708,074, April 9, 1929), this circuit is placed at right angles to the moisture-sensitive element; one plate of the condenser is in a fixed, but adjustable position, while one end of the other plate is connected to the free end of the moisture-sensitive element, so that variations in the length of the latter (produced by variations in the moisture content of the sheet) changes the distance between the plates, and hence the capacity of the condenser. As in the previous patents, the

cnanges in capacity are measured by the resultant changes in the current flowing in the receiving circuit, by the use of a millivoltmeter the mechanism being adjusted as to sensitiveness so that any deviation in moisture content which may be expected will be insufficient to move the pointer off the scale in either direction. The millivoltmeter is used to control a current supply to a relay in such a manner as to control the valve-operating mechanism so as to adjust the back pressure in the steam return line of the dryers, increasing the back pressure when the moisture content increases and decreasing it when the moisture content falls below the point for which the instrument is set. As there is not exact synchronism between the operation of the various parts of the mechanism and this lack of synchronism may be cumulative over long periods, in time any one seting of the instrument needle may not correspond to the same valve setting at which the mechanism was originally adjusted to operate, and consequently the moisture conditions which the mechanism tends to maintain constant may not be those for which it was originally set. This is overcome by providing means by which there is a tendency of the mechanism to re-establish periodically or concurrently with other actions an equilibrium relation between the instrument- needle indication and the stem-valve setting, and at the same time to bring the needle back to its initial setting for the desired moisture content on every departure therefrom, regardless of what position the valve may occupy.—A. P.-C.

Method of and Apparatus for the Preparation of Fibrous Material from Stalks. Emil Gminder. U. S. pat. 1,715,911, June 4, 1929.—The stalks together with their leaves and seeds are placed transversely across a series of pairs of endless conveyor tapes between which are placed knives or saws for cutting the stalks in appropriate lengths. The cut stalks are delivered on two conveyors, placed transversely of the first conveyors and in alignment with each other, but traveling in opposite directions to each other. They are so placed that one of these conveyors receives the portions of the cut stalks which are suitable for direct further treatment and delivers them to the breaking, beating and cleaning apparatus, which is preferably in the form of a Crichton opener; the second conveyor receives the heads of the cut stalks, including the seeds and leaves, and delivers them to a thrashing machine to remove the seeds, leaves and other unsuitable portions, while the usable portions are returned to the main stream of the good portions of the stalks.—A. P.-C.

Shredding Machine. Rexford E. Bevis. U. S. pat. 1,725,176, Aug. 20, 1929.—In shredding machines comprising opposite sets of cutting and cleaning rings, used for shredding stock coated with wax or paraffin or containing other substance which adhere to the mechanism, a set of four cleaning rolls are provided, one each in front and at the back of each set of cutting and cleaning rings so as to prevent or minimize the accumulation of adhesive substances in the shredding mechanism.—A. P.-C.

Beating Engine. Walter Werner assignor to The Noble and Wood Machine Co. U. S. pat. 1,712,599, May 14, 1929.—The cutting edge of the fly bar is saw-tooth-shaped instead of straight, and the bedplate knives are shaped correspondingly to co-act with the fly bar. The bedplate is perforated to allow the stock to pass through as soon as it has been beaten to the required extent.—A. P.-C.

Paper-Pulping Engine. Walter Werner assignor to The Noble and Wood Machine Co., U. S. pat. 1,712,598, May 14, 1929.—The engine consists essentially of a breaker beater in which the roll and bedplate are replaced by a paddle wheel and a whipper. The blades of the paddle wheel extend from the outerwall to the midfeather and are proportioned to dip deeply into the stock when rotated so as to force the stock and water to circulate; they are preferably set at an angle to the radii of the wheel, so that when they leave the water any stock which may be in contact with them will be readily discharged from the wheel. The whipper is mounted immediately behind the paddle wheel and consists of a hub or core with projecting arms or spokes. It is driven at a higher speed than the paddle wheel. Behind and close to the whipper is a separating rack or screen consisting of a series of closely spaced bars. The action of the whipper throws the stock against this rack; any stock which has been sufficiently disintegrated passes through and is caught in a trough by means of which it is removed from the machine, while the insufficiently disintegrated stock cannot pass through the grate and falls back into the beater trough.—A. P.-C.

Combined Beater, Washer and Pulp Extractor. James T. Murphy, U. S. pat. 1,716,898, June 11, 1929.—The beater roll is made in the form of an open framework or skeleton, including two end plates or heads and a number of interposed spiders which are secured to the shaft. The outer ends of the spiders and the rims of the end plates carry toothed rings which form spaced supports for removable screens or filters. The hubs of the spiders support frusto-cone-shaped tube sections which, when the roll is in place, slope towards the midfeather and provide an inclined surface for the flow and discharge of water or liquid pulp. The space between the periphery of the roll and the cone-shaped surface is divided into longitudinal compartments which are parallel to the axis of the roll and have individual outlets at their smaller or midfeather end. When the engine is to be used as beater and washer the periphery of the roll is closed by perforated pulp-screen or water-filter sections; inwardly inverted trough or channel shaped screen sections, or a length approximately equal to that of the roll, are carried by the projecting supporting teeth of the rings, these trough-shaped sections forming projecting blades around the roll; the intervening spaces between the edges of adjacent blades are closed by curved perforated screen sections. In order to convert the engine from a beater-washer into a beater-pulp-extractor, the filter sections are replaced by others having larger perforations which will permit the properly beaten stock to pass through.—A.P.-C.

Pulp Extractor. George S. Witham, Jr. U. S. pat. 1,722,693, July 30, 1929.—A portion of the hood or roll-cover is cut away, and the extractor is placed over this opening, a gate being provided for closing the opening if it is not desired to use the extractor. The extractor comprises a casing having a perforated screen portion and an impeller or paddle, the screen being preferably cylindrical and the impeller coaxial with it and arranged to turn with its edge close to the screen. Owing to the position of the extractor, it is mostly the finer material in the beater that is thrown up into it from the roll by centrifugal force; and the material that is forced through the screen by the impeller falls into a trough from which it is removed by a screw impeller. If desired, a number of beaters may be equipped with extractors having successively finer screens, the material passing through the coarsest screen being delivered to the beater having the extractor with the next larger screen-mesh, and so on until the stock from the last beater is delivered in such form that it can be sent directly to the paper machine.—A.P.-C.

Suction Box for Machines Making Bulky Webs Such as Wadding. Harrison R. Williams, U. S. pat. 1,715,398, June 4, 1929.—The suction box is preferably of circular cross section, or at least curved at the top. The opening through which suction is applied to the traveling web consists of a slit from 1/16 to 1/32 inch wide, and the pipe leading from the suction box to the pump has a cross section at least as large as the suction area, so that a high vacuum can be applied across a narrow strip of the pulp web. In this way the air is drawn through the web at a high velocity, carrying off the maximum amount of moisture and preventing the slit from becoming clogged with fibers or other particles. The web then passes into a chamber where it is more or less completely dried by circulating heated air, and the web is not passed through any presses so as to avoid compressing it.—A.P.-C.

Stock-Spreading Flow Box. Edwin H. Streeter assignor to Wood Conversion Co. U. S. pat. 1,712,852, May 14, 1929.—In the manufacture of certain types of wall board the stock to be used is mixed with water to form a slurry containing about 95 per cent water, and this slurry is flowed on to a fourdrinier wire in a layer of substantially uniform thickness and passed through a press to remove a large portion of the water and compress the layer into a compact sheet or board. The damp sheets are then passed through a drier to produce a final product of the desired moisture content. The wire on which the stock flows has an intermittent movement to permit the necessary pause for the pressing operation. Due to the intermittent movement of the screen, it is necessary to control the feed of stock to obtain a uniform layer. This is obtained by making the flow box move intermittently, the flow box being moved while the screen is stationary. It is mounted on a track extending transversely of the screen and is moved intermittently while the screen is at rest to deposit a layer of stock on the portion of the screen that has just moved into position beneath the path of travel of the flow box. The latter then remains at rest at one side of the screen while the section of the screen on which the layer of stock has been deposited moves forward toward the press, and when the screen stops the flow box moves automatically to the other side to deposit another layer of stock. Suitable means are provided for automatically starting and stopping the flow box and coordinating its movements with those of the screen.—A.P.-C.

Preventing the Grooving of Suction-Box Covers. Charles W. Valentine and Alfred H. Helin assignors to The Bagley and Sewall Co. U. S. pat. 1,713,988, May 21, 1929.—The suction boxes are mounted so that they can be given an angular reciprocating movement and at the same time an endwise or widthwise movement, so as to effect uniform wear of the box-covers and prevent grooving by the wire.—A.P.-C.

Wire Guide for Paper Machines. F. Ciborowski. U. S. pat. 1,712,378, May 7, 1929.—The guide roll is supported in a stationary bearing at one end and in an open-sided hook bearing at the other end. The latter bearing is supported by a vertical stud having a head under which is an adjustable spring. The frame of the machine is provided with a fixed arm on which is pivoted a feeler mounted to remain in contact with the edge of the wire. Sideways displacement of the feeler acts to close an electric circuit which energizes an electromagnet which raises or lowers the movable bearing, thus bringing back the wire to its proper position.—A.P.-C.

How Long Is Your Wire? Peter Smith. Paper Industry 11, 1002 (Sept., 1929).—A brief discussion of the relative merits of long and short wires for high speed machines, showing that a 75-foot wire with, say, 25 feet of molding surface will outlast a 100-foot wire with 37 feet of molding surface.—A.P.-C.

Consistency-Viscosity-Density Control. Anon. Paper Industry 11, 1216-1217 (Oct., 1929).—The Thyle Consistency Control Unit consists of a smooth cylinder rotated at a constant speed by an electric motor, in a pipe line or tank through which the material to be controlled is passing. As the consistency or viscosity of the pulp varies, a proportionate variable friction is exerted on the rotating cylinder. The changes in power required to drive the cylinder are registered through mercury switches, which in turn open and close magnetically operated actuating coils in the reversing switch. The opening and closing of these switches direct the rotation of the motor on the dilution valve, and governs the amount of dilution necessary to equalize the variations in consistency.—A.P.-C.

Flow of Water Through Woven Wire Cloth. C. K. Textor and J. H. Gulbrandson, Northwest Paper Co., Cloquet, Minn. Paper Trade J. 92, No. 13, 59-60 (Sept. 26, 1929).—The flow of water through a clean screen is much greater than is generally supposed; 10 sq. ft. of clean 60x56 wire cloth under a 12-inch head will screen water at the rate of 12,500,000 gallons per day. Cleanliness of cloth is vital in obtaining large screen capacity; a cloth which is visually "not very dirty" may have only 5 per cent of maximum capacity. The formula $Q = 0.815 \times K \times \frac{A\sqrt{H}}{\sqrt{L}}$, in which Q is the flow of water in gallons per minute per sq. in. of cloth, K an undetermined factor, approximately unity, depending on the wire and weave, A the percentage of open area in the cloth, and L the nominal number of lineal inches of wire per sq. in. of cloth, gives approximate figures for the flow of water through clean wire cloths.—A.P.-C.

Critical Investigation of the Technical Progress Made in the Manufacture of Sulphite Pulp as Culled from the Literature of the Past Year. Fr. Muller. Wochbl. Papierfabrikation 61, No. 4, 109-112 (Jan. 25, 1930).—The steam required to dry pulp is only a small part of that necessary for the cooking of the wood. The utilization of the available heat in coal has increased from 60 per cent in 1900 to over 80 per cent at present, due to the use of pre-heaters and superheaters. By giving more attention to the firing, ignition and radiation effects, a heating surface of one square meter produces 30 kilograms of steam per hour and with special types of boilers, up to 40 kilograms. With a Ruths Steam Accumulator, 20-50 per cent of the boiler heating surface can be done away with, in the sulphite manufacture, with a resulting saving of coal from 15 to 20 per cent. In back pressure operation, the relation between the steam for power and the steam for heating must be kept so that the exhaust steam, which means a loss, is avoided. A means of holding the firing and with the boiler control constant with varying loads, without losing the pressure of the feeder, an equal pressure steam feeder is used to add fresh steam up to 20 atmospheres. With this accumulator the boilers are kept at an average load. The boilers send their excess steam during periods of low load into the accumulator, where it is sprayed with water which comes from the economisers at 100°C. With powered coal installations, the combustion temperature is advantageously raised, which is well adapted to sudden loads. By preheating with stack gases the air used in the combustion, a saving of 5 to 14 per cent is affected, especially with low grade fuels. The Ljungstrom air preheater is very effective, takes little space and gives a saving of fuel up to 10 per cent and increases the boiler efficiency from 76 per cent with an economiser to 85 per cent with the Ljungstrom. It is more advantageous in steam turbines, to lower the back pressure than to raise the feed pressure. To produce 1 kilogram of steam at 60 atmospheres, 660 large calories are necessary, that is about the same heat required for 1 kilogram at 7 atmospheres. The heat content of superheated steam at 400°C. is only about 2 per cent between 10 and 60 atmospheres.—J. F. O.

Control of the Acid Towers in the Manufacture of Sulphite Pulp. W. Humm, Solothurn, Germany. Wochbl. papierfabrikation 60, No. 52, 1614-43 (Dec. 28, 1929.—Baumé hydrometers are not dependable when used alone, as for example, in the summer with same specific gravity the acid contains too much and in the winter too little calcium oxide. For a certain specific gravity there are many different acid compositions. The measurement by electrical conductivity also has the same faults. After many different analysis of the specific gravity and sulphur dioxide content, the author came to the conclusion that the specific gravity of acids of different sulphur dioxide content, increases in a linear function with the calcium oxide content. The influence of the calcium dioxide upon the specific gravity is just about three times as great as that of the sulphurous acid.—J. F. O.

Determination of Calcium Sulphate Content in the Tower Acid. E. Schmidt and Phil C. Horn, Mannheim-Waldhof. Papierfabr. 26, No. 52, 813 (Dec. 29, 1929).—A reliable and quick method of determining the So_4 content is by means of benzidin, according to Raschig. This determination can be carried out in the presence of sulphurous acid. The two other methods of calcium sulphate determination are, (1) by boiling away the sul-

phurous acid in an atmosphere of carbon dioxide and then precipitate the calcium sulphate in the usual manner and the other method is to precipitate all as calcium sulphate and determine the sulphurous dioxide separately by titration with iodine. Raschigs method depends upon the fact that the benzidin sulphate precipitate out from the benzidindichlorhydrate and the sulphate ion breaking up in hot water to benzidin and sulphuric acid, so that the free sulphuric acid formed can be titrated with sodium hydroxide using phenolphthalein as indicator. According to Raschig, the benzidin sulphate will only completely precipitate out in neutral or slightly acid solution. Rachig's method has shown itself to be quicker and more accurate than the other methods but it can not be used with cooking acid which contains organic matters such as lignin sulphonic acid which has the same reaction as sulphuric acid.—J. F. O.

Effect of the Neutral Sulphite Content of Cooking Acid on the Pulping of Wood by the Sulphite Process and the Properties of the Pulp. Erik Haaglund. Paper 33, 179-184 (Feb. 1930).—Experimental cooks were carried out with liquor containing 4.25 per cent total sulphur dioxide and from 0.65 per cent to 1.15 per cent lime. Increasing the lime content slows down the cooking process. The rate of cooking is directly proportional to the acidity as shown quite clearly by the curve of reducing sugars plotted against time. With high lime content, however, towards the end of the cook there is a rapid increase in the reducing sugars, which is due to decomposition of the end of the cook solution of the lignin, when there remains only 0.5 per cent to 2.0 per cent in the pulp, is very slow. At this stage the pulp can be considered as easy-bleaching, and further delignification is accompanied by a large loss of cellulose. Up to the point where a 50 per cent to 51 per cent pulp yield is obtained, there is an almost linear relationship between the yield and the lignin content of the pulp; beyond this point, the hemicellulose, and even the cellulose, dissolves more rapidly than the lignin. It is even doubtful whether lignin can be completely removed from the carbohydrates by this process. Delignification is best effected with acid having a medium initial combined sulphur dioxide content. The results of the experiments would indicate that the optimum composition of this purpose is 0.8 per cent to 1.0 per cent of lime for a total sulphur dioxide content of 4.25 per cent. With higher combined, there is danger of decomposition of neutral sulphite towards the end of the cook, with production of sulphuric acid. The experiments show that easy-bleaching pulp can be obtained in a 47 per cent yield on the dry weight of the wood, but this requires good circulation in the digester.—A. P.-C.

Resistance of Alloys to Sulphite Corrosion. J. D. Miller. York Haven Paper Co., York Haven, Pa. Paper Trade J. 90, No. 23, 91-92 (June 5, 1930); Paper Mills 53, No. 22, 10, 12 (May 31, 1930).—A preliminary report outlining some of the results obtained with ferrous and non-ferrous alloys in a specially designed corrosion chamber (Not described). No definite conclusions can yet be drawn, as only a few alloys were subjected to duplicate tests; but the most promising alloys seem to be iron-nickel-chromium alloys with certain limits of composition.—A. P.-C.

Process for the Manufacture of Sulphite Pulp from Pine or from a Mixture of Such With Spruce. E. L. Rinman, Djursholm, Sweden. Finish pat. 12,589 (Aug. 5, 1927).—The cooking is carried out with a sodium bisulphite solution containing over 20 grams sodium oxide per liter, whose content of sulphur dioxide is somewhat greater than is necessary for the formation of sodium bisulphite.—J. F. O.

Process for the Softening of Wood and Similar Substances in the Manufacture of Wood and Paper Stock. Leopold Enge, Niederschreiberhau, Switzerland, German pat. 484,805. (Nov. 2, 1924).—The wood is treated with a mixture of gaseous sulphur dioxide and steam under 100° C.—J. F. O.

Process for Gassing or Relieving the Pressure of Cellulose Digesters of Similar Apparatus. E. Morterud, Torderoed, Moss, Norway. Finish pat. 12,542. (Feb. 18, 1927).—A part of the digester liquid is drawn off into a container held under lower pressure, in which the gas and steam completely separates while the liquid can then be either collected or wholly or partially pumped back to the digester. By tangential entrance of the liquor into the container it is given a centrifugal action which tends to form a hollow revolving body whereby the gas and steam are more favorably removed. In place of a single gas and steam separator, several can be used also with gradual lowered pressures.—J. F. O.

Alkali Cooking Liquors from Waste Sulphite Liquors. O. Routala, J. Sevon and Sven Weckman. Beret. 18th Skand. Naturforskermoede, Copenhagen, 1929, 471-475 (in Swedish).—Some sulphite cooking liquor was freed from calcium oxide by adding sodium sulphite; it was then evaporated and fused. This melt was used for a lye in cooking pine wood and the results were compared with a regular sodium hydroxide liquor control. The tabulated analyses are very much alike.—C. J. W.

Concerning Sugars in Sulphite Waste Liquor. Hugo Krause, Dresden, Germany. Technologie und Chemie der Papier—und Zellstoff-Fabrikation 27, No. 12, 192 (1929).—Differences in sugar content of 1.338 per cent by the Lindsey and Tollens method and only 0.942 per cent according to Krause method is attributed to the small alcohol solubility of the sugars in the waste liquor and to its decomposition during the heating in an alkali solution. These were the results of an investigation by Lottermose and Mathiesen and are refuted by Kraus on grounds of improper manipulation.—J. F. O.

Operation of Evaporators for the Evaporation of Sulphite Waste Liquors. Siemens-Schuckert Werke A. G. Berlin, German. German pat. 486,460. (Jan. 11, 1925).—The operation consists in bringing the vapors from the evaporation to a higher pressure in the usual manner and in re-using these vapors for the heating of the evaporator, The evaporated waste liquor is decomposed in the usual manner by the action of electricity for the purpose of preventing the solid matters from depositing on the heating surface and thereby holding constant the maintained temperature difference, between the contents of the evaporator charge and the steam used for the heating. The evaporator is cylindrical with vertical steam tubes. The waste liquor fills the conical bottom and covers the tubes. The vapors coming off are compressed and then introduced to the evaporator at a higher temperature, thereby bringing the waste liquor to the boiling point. The resulting condensate is removed. A steam inlet is introduced in the heating line to the evaporator after the compressor. Anodes are immersed in the waste liquor while the cathodes are fastened to the wall of the evaporator above the liquor level.—J. F. O.

Process for the Manufacture of Floating, So-Called "Soap," From the Waste Liquors of the Soda and Sulphate Pulp Manufacture in Joint Treatment of the Sulphite Waste Liquors. C. H. Michelson, Helsingfors, Finnland. Finnish pat. 12,689 (May 9, 1928).—The treatment of the soap takes place with a dilute, or, more or less concentrated sulphite liquor, or such substances obtained after the sulphite yeast or sulphite alcohol recovery manufacture, at the usual temperatures or higher. The rosin and the fatty acids, thereby liberated, are extracted with a suitable solvent, the solvent then removed, the rosin and the fatty acids removed in the usual manner and the sulphite waste liquor is evaporated to dryness.—J. F. O.

Process for the Use of Soap, Turkey Red Oil and Similar Substances in Acid Baths which also Contains Calcium or Magnesium Salts. I. G. Farbenindustrie, Frankfurt, a.M. Germany Norwegian pat. 46,924 (May 28, 1926).—The process is characterized by an addition of sulphite waste liquor or real sulphonic acids of aromatic or hydro-aromatic compounds.—J. F. O.

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Investigating and Analyzing Distribution

By L. G. Cattermole[1]

Continued from last week

Analysis of the Market

In studying the market a manufacturer must have available an analysis of the profitability of the various customers, groups, classes or geographical sections. In many cases personal contact must be used to determine the capacity of the market and the purchasing trends. A visit to convents and similar institutions in New England and Canada, revealed a market for old-fashioned full length, long-sleeved, high necked muslin nightgowns, to a manufacturer of ladies underwear. Today, over fifty percent of his factory is profitably engaged in this staple line of garments, previously considered obsolete.

A short time ago, the lighting fixture manufacturers started a campaign to endeavor to sell new lighting fixtures to people with old homes, based on the theory that lighting fixtures should be changed as often as furniture and rugs. They overlooked, or hoped to overcome the psychological attitude that people had, relative to lighting fixtures being "fixtures" in the home, the same as wash bowls, bath tubs, etc. At present a home modernization movement is taking place, which should be the means of developing a considerable amount of new business for lighting fixtures, as well as other construction materials. It has been stated by "domestic commerce" that over $2,000,000,000 worth of modernizing is contemplated for 1930. It was obviously impossible too for the lighting fixture manufacturers to bring about this program for modernization through their own individual efforts. However, with this movement under way, they should be able to ride the crest of the wave, and benefit in terms of increased sales from the concerted effort of all industries concerned.

A thorough survey, at the time that the lighting fixture manufacturers embarked on their publicity campaign, would have shown them the futility of spending considerable sums of money at that time, on this type of advertising, it would have prepared the fixture manufacturers to take advantage of the modernization movement when it arrived, and it also would have shown them how they might have enjoyed greater sales and larger profits through increasing the lighting fixture appropriations for new buildings.

Sometimes certain facts relative to the sizes of particular markets are obtained through the use of carefully prepared questionnaires, and sometimes through a well-trained staff of investigators—often through both. A manufacturer of tissue papers sent out a questionnaire which revealed a large and profitable market for specially decorated Christmas tissues. It was possible to determine the capacity of the market so accurately that the production department used the Christmas papers as a "fill-in" beginning in January to keep the factory running at capacity the year 'round.

A knowledge of the actual factory capacity, and its productivity at various seasons of the year is helpful in outlining sales procedure. For example, a small sash and door manufacturer, making special products on a contract basis was desirous of increasing his business to absorb the extra productive capacity of his factory. Examination showed that the seasonal nature of the special goods would have necessitated working nights and Sundays during the busy season with the entire organization in a confused condition, and the knowledge that during the dull season the factory would be just as "slack" as previously, with a consequent reduction of the working force, loss of good operatives and an increase in burden rates during that period. It was apparent that a new product should be developed which would take the following factors into consideration:

1. Product should be entirely or largely made of wood.
2. It should be a standardized product which could be manufactured in reasonably large production lots.
3. It should be a product which should either be free from seasonal fluctuations, or which could be manufactured and placed into stock during the period of minimum sales.
4. It should be a product which could best be sold entirely within a radius of 500 miles of the factory.
5. It should be a product for which there is a constantly increasing demand.
6. Competitive conditions should not be severe.
7. It should be a product which could be marketed to best advantage through their established sales organization.
8. If possible, it should be a product which, during its manufacturing and sales development, could be used to fill in the production gaps brought about by the seasonal manufacture of the present contract products.
9. It should be free from radical style changes, if possible.

A survey by questionnaire and personal contact indicated a good sized market for certain types of built-in cases and furniture which fully measured up to the above requirements.

A short time ago, an electric power company desired to increase their customers' power consumption, through the increased sale and use of electrical appliances in the home. A selected group of inspectors were brought in to the home office for training, as investigators. With the main idea of rendering service, they interviewed those housewives who would probably make the best potential customers for additional appliances. They looked over the electrical outlets, made recommendations covering the use, care, repair and maintenance of the various appliances in

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use, and answered questions and made tactful suggestions regarding other appliances owned by the housewife. They secured a list of all appliances owned in each home, and the sales department, by judicious and well selected direct mail advertising, plus diplomatic phone calls and an occasional personal call was able to increase the sale of electric appliances to a figure double that of the previous year—and of course, the power consumption curve is steadily rising.

A few years ago it was argued that goods should be first manufactured, then sold. Now, it is pretty generally realized that we must manufacture and sell at the same time, if we are to enjoy the greatest benefits from our present economic structure. Large warehouse stocks often become obsolete quickly, and tie up a considerable sum of working capital, while large quantities of unfilled orders often make for inefficient production and careless salesmen. The scientific method of management is to carefully study the market, to intelligently forecast sales, to accurately schedule and control production, to budget expenses and receipts, to continuously reduce costs so than an ecomonic relation may be established between prices which the prospect can afford and prices which are charged. Constructive plans for the entire operating program should be based upon a thorough analysis of the market.

Bringing Product and Market Together

The problem of most effectively reaching the market resolves itself mainly into two factors, namely, salesmanship and advertising. Sometimes it is found that one may be used to best advantage and sometimes the other, but generally both, must be employed to secure the greatest benefits. But before either can be utilized to their fullest advantage, it is necessary to set up effective and consistent channels and methods of distribution.

Bringing the product to the market is probably the most complicated factor in our present business structure. Many attempts are being made to reach a satisfactory solution—some of them are good, many are merely temporary solutions which will not stand the test of time. Some of the brightest minds in the business world today are devoting their entire time and attention to securing the most effective and economical methods of distribution.

With the increased complexities of modern mass production, distribution is no longer the simple problem that it used to be. Larger markets must be reached, greater facilities must be provided for making goods available,—in other words a line of service agents and stations must be established to maintain the contact between the manufacturer and the consumer.

Channels of Distribution

Many attempts are being made to revert, in a more effective manner, to the more direct distribution methods of olden times. Mail order selling, door-to-door selling of brushes and hosiery, chain stores, and department stores controlled by the mail order houses are straws that indicate which way the wind is blowing. It is interesting to note, that one of the largest mail order houses had a decrease in mail orders of nearly 3% in 1929 from the 1928 figures, while their chain department stores sales increased 104%. The buyers' market during the past ten years has hastened the attempt to eliminate the middleman, and the attempt to bring manufacturer and ultimate consumer into a closer and more intimate relationship. The complicated cross-channels of distribution, which eventually fastened themselves on our business map, tended to slow up, instead of facilitate the absorption of goods, with the result that a strong effort is being made to straighten them out, so as to permit an uninterrupted flow of goods.

In any analysis of distribution channels, it must be remembered that there are certain utilitarian services and functions which must be performed, between the manufacturer and the ultimate consumer, consequently, the most effective and economical methods must be selected for the purpose. In any event, no method of distribution in the present stage of development may be considered as unchangeable.

The methods and channels must fit the product, and the long range view of present and future requirements must dominate the development plans. Butter, milk and bread must be distributed in a different manner than sugar, cookies and pickles—although they might go through the same channels. Some of the more progressive bread manufacturers have built up a large volume of sales through door to door delivery; thus breaking away from the grocery store methods, with their attendant "stales" evil.

Every link in the chain of distribution for any product must therefore be subjected to microscopic analysis and research, and every known test applied which will indicate its ability to take the load and stand the strain of competitive conditions. In doing this the manufacturer must be assured that there is no actual or possible conflict in the distribution methods or channels. Many manufacturers are selling to jobbers and directly to these same jobbers' retail customers. Obviously this is both unfair and unwise, and sooner or later will result in conflict which may, in some cases, prove disastrous.

The question of service to the distributor and to the ultimate consumer is a very important element in determining the methods of distribution. Goods of a specialty nature, and large bulky products must generally find the most direct methods of marketing. Specially designed show cases and building materials, specially designed machines, and specialty machine tools fall into this category. On the other hand, it has been found that specially designed lighting fixtures, for instance, can often be best distributed through a carefully chosen and well balanced dealer organization.

Exclusive Representation

It is quite common to find the questions of exclusive, selective, and general distribution to be the subject of much controversy, despite the fact that a few general rules are applicable to nearly all cases. This is often due to the fact that expediency has determined the particular policies in some localities or under certain conditions, which were at variance with the general policies originally adopted.

When goods are sold through only one jobber, dealer or agent in a certain town or territory, and the territory has been clearly defined, as well as all other terms of the agreement, the manufacturer may be said to have exclusive representation.

Selective distribution is obtained by having only a few well chosen firms or representatives handling the goods in the various territories.

General distribution is, of course, the sale of the products quite generally to any or all dealers or others, who are able to stock, finance and push the sales of the goods.

While the manufacturers' objective is to secure the maximum profitable sales from any locality, it often seems that this is in conflict with the same desire on the part of the dealer. A paper merchant in one of the larger cities of New England had the exclusive agency for a special butchers' paper. His sales, on this product, had shown a small yearly increase which seemed reasonable to the manufacturer. A market analysis, however, showed the manufacturer that he was not securing the amount of sales from this territory which should be expected. The paper merchant, after having been shown the results of the survey, did not have sufficient faith in the figures to agree to expend any added effort for the purpose of securing the extra business, which it was believed was available. However, he did agree to permit the manufacturer to select an additional distributor for this paper in that particular locality, provided the accounts, which the first merchant was selling, were not approached or solicited by the second merchant. To this, everyone consented, and the sales by the second merchant exceeded the sales by the first merchant over 100 per cent within three years time. And to the surprise of the first merchant, his sales were in-

creased more than 70 per cent above the normal expected increase, indicating that a little legitimate competition is often an added spur to increased activity and profits.

When manufacturers are marketing a specialty product, it is usually desirable to secure exclusive or selective distribution. Machine tools and office filing equipment are examples of goods which are successfully handled by means of exclusive representation, while radios are an example of goods handled by means of selective distribution. The most successful manufacturers in the radio field are extremely careful about granting franchises to distributors. Bar candies, other food products, underwear, shirts, and collars are examples of goods usually having general distribution. Goods intended for general use usually call for general distribution. Sometimes manufacturers of specialty items, having exclusive representation, in their desire for greater distribution, have opened up new and additional general outlets for their goods, which have proved highly successful, thus breaking away entirely from the plan of exclusive representation. They have done this in the belief that a large number of dealers representing them in a less aggressive manner should secure a larger volume of sales than a single distributor working more aggressively.

As a general thing, exclusive agencies have a tendency to maintain prices. Where a large and varied stock must be maintained, or where the units of sale run up into the hundreds and thousands of dollars, there, too, exclusive representation will generally be found most desirable. The need for special and individualized sales effort on a product, or installation and repair service calls for exclusive or selective distribution. New goods which are not advertised by the manufacturer can often be sold in much larger volume at first through the efforts of well selected exclusive agencies, providing the goods have considerable merit which will help the dealer build up individuality, sales and good-will for his store.

The usual cry of the dealer is for exclusive agencies, first, because he believes that he should be permitted to reap the entire reward of his sales effort on any particular line; second, because he is opposed to the price cutting tactics, which often follow a policy of indiscriminate selling; third, because he believes that the results of any advertising done by himself should not accrue to any one else handling the same line; fourth, because his reputation it often enhanced by being tied in with the reputation of a well and favorably known product and its manufacturer. In general, the tremendous volume of nation wide advertising coupled with scientific market analysis and sales management seems to be influencing the trend of distribution for most commodities away from the exclusive agency into selective and general distribution channels.

Other factors which have a direct bearing on the question of distribution are the type and character of the market, cost of distribution, methods of financing sales, credit and collection policies and methods and the volume of sales.

Cost of Distribution

There is a very healthy trend, today, toward careful compilation and analysis of selling costs. In the early days of so-called "cost systems" the manufacturer's cost of selling was lumped together with administrative costs—the whole being grouped into what was termed "Commercial Burden." Later selling costs were separated from administrative costs, and still later the various items of selling cost were drawn up, analyzed and examined in comparative form. Today, the tendency is to break down each element into its relative and component parts and to challenge each charge with the one word "why?"

In addition to this, many of the more progressive manufacturers have analyzed their various distributors' costs of selling in the same manner, with the idea of assisting them to reduce their costs and pass on the savings thus secured to the ultimate consumer. There has been no philanthropic or altruistic motive in doing this. These manufacturers have realized that if they are to continue to exist in the face of terrific competition these things must be accomplished.

Perhaps these excessive costs may be more forcibly brought to the manufacturer's attention since popular writers have written about them in some of the "hair-shirt" articles which have recently appeared. Certainly the estimated eight billion dollars a year distribution waste which has been flaunted by these authors calls for careful study to bring about its reduction. Eight billion dollars a year amount to nearly eighty dollars for every man, woman and child in the United States. It will be found, however, that the strongest incentive to reduce costs —whether of manufacture or distribution—is intensified competition, despite the fact that some of this competition may be unintelligent and unethical.

In the lower-priced jewelry and silverware lines, for instance, small shops have started up with little else than a foot press and bench, located occasionally in the basement of the proprietor's home. Designs have been "pirated" from the lines of legitimate and well-established manufacturers. The proprietor often goes out and takes orders, and then comes back home to manufacture the goods—often with the help of his wife and older children. Exact copies of other manufacturers' products are furnished at prices which are five, ten, fifteen, and twenty percent below the original manufacturers' prices.

Conceding the fact that this small manufacturer has a lower overhead, that he doesn't know his costs, that he will eventually grow into a large legitimate manufacturer or else fail,—the established manufacturers must face this competition here and now. Those jewelry concerns which have sound distribution methods and which are making earnest endeavors to reduce their manufacturing costs through improved and scientific management methods are getting their share of the business. Most of the others are simply decrying present conditions, and hoping for some miracle to happen which will rehabilitate their sales. An example of the uneconomical sales methods was cited by one of these manufacturers in Attleboro, Mass. who stated that on one night last September, nine salesmen from nine different factories, whose products did not materially conflict, left on the same train from New York to see the same buyers in the city of Pittsburgh. Co-operative sales effort, thru a form of selling syndicate, would probably reduce the cost of selling, and increase both volume of sales and profits for these manufacturers.

Service

There has been a considerable amount of thought devoted to the problem of service. Some types of products, particularly of a specialty nature, must have considerable service prior to the sale. Such items are machine tools and certain building equipment, which require special drawings to be made and submitted for approval, before the contract is signed. Many of these special items require much service in the factory, for the purpose of matching other products, testing to suit peculiar or particular requirements, and meeting promised delivery dates. In such cases, very close contact must be maintained between the manufacturer and the ultimate consumer. This necessitates very careful selection of the class of distributors, as well as each individual one, if personal field representatives of the manufacturer are not used.

Installation, repair and adjustment service are generally best handled by carefully selected exclusive representatives, altho there is an increasing tendency in several industries to establish service stations owned and controlled by the factory. It is hoped by this means to render a higher standard of service than could be obtained by any other means, as the ideals of the factory and the factory owned service station are one and the same.

The volume of distribution in various territories, is a deter-

mining factor in laying out an effective sales program. In the first place, its effect on the costs of production and distribution must be carefully determined. The so-called "volumitis" fever has reduced the profits of many manufacturers who have erroneously believed that increased volume of sales in itself, would spread the overhead or burden items over a larger quantity of goods. In some cases they have, therefore, arbitrarily reduced prices to secure this increased volume, and in other cases they have had to increase their selling and administrative costs to secure this additional volume. Smaller and less profitable towns and prospects have had to be covered, thus increasing traveling and interviewing expense per prospect, more salesmen have had to be added, and advertising expense has been extended. The net result has been a decided reduction in profit per unit of sale, and a surprising (to them) reduction in net profits at the end of the year. Only a careful study of all the factors entering into this problem will reveal the correct policy which should be followed.

Credits

Sometimes, tho not so often as formerly, it happens that an overly rigid credit policy restricts sales. Bad debt losses, business conditions, and their effect on sales must be judiciously weighed, and a sound policy adopted, which will not affect either sales or profits adversely. The credit mens' associations have accomplished a great deal for manufacturers in general in this respect. Where too tight-fisted a policy dominates credits, then sales are sure to be restricted, and when too open-handed a policy dominates credits, then losses from bad debts will wipe out part or all of the expected profits. Inasmuch as most chief executives watch this factor very closely, comparatively little trouble is generally experienced. It is often found, however, that an examination will result in healthy and constructive recommendations pertaining to some phases of this subject.

Installment Selling

The selection of a distribution, or financing method which enables sales to be financed to best advantage, so that the largest number of potential customers may procure the goods offered, is still a puzzling question to many establishments. Here again we find the evidence of many new ideas, which are being tried, some of which are proving quite successful. The most outstanding development in this field has been that of installment selling. Almost every business man will admit the soundness of installment sales, when properly devised and controlled. In any event, sales must be financed, and many times sales may be increased appreciably by a supplementary or new method of financing.

Selling

With the development of modern business, organization has been extended to every branch of its activities, and with the need for better distribution, greater emphasis has been placed on organizing for productivity in the sales department. In no other branch of business, up to a short time ago, have such loose organization methods been tolerated as have obtained in the sales departments.

Overlapping of duties of the office staff, lax methods or no methods at all of securing, training, controlling and rewarding salesmen have all played a sorry part in maintaining ineffectual results.

Looking Around for a Way Out

Now the manufacturers are calling for their sales department to produce, and sales managers are, in many cases, looking around for a way out of their dilemma. Very often, the answer lies within the organization itself, rather than in the product, the market or the distribution channels. "Pep" meetings and letters help, but they can never hope to imbue an otherwise impotent or untrained sales force with the ability to secure profitable sales.

(To be concluded)

Census of Envelope Manufacturers

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 15, 1930—The Bureau of the Census announces that, according to a preliminary tabulation of the data collected in the Census of Manufacturers taken in 1930, the total value of products shipped or delivered in 1929 by establishments engaged primarily in the manufacture of envelopes amounted to $56,454,000, an increase of eight-tenths of one per cent as compared with $56,006,225 reported for 1927, the last preceding census year. The total for 1929 is made up as follows: Envelopes, $54,851,000; other products, $1,185,000; amount received for contract work, $418,000.

The statistics for 1929, with comparative figures for 1927, are given in the following table. The figures for 1929 are preliminary and subject to revision. They are based on actual returns from manufacturers who contributed the greater part of the total value of products for the industry at the census for 1927, on returns from those who reported for the first time at the census for 1929, and on estimates for manufacturers who reported for 1927 but have not yet made their returns for 1929.

	1929	1927	Per cent of increase or decrease (—)
Number of establishments	155	153	1.3
Wage earners (average for the year)[1]	9,658	9,745	—0.9
Wages[2]	$10,869,000	$10,754,636	1.1
Cost of materials, fuel, and purchased electric current[2]	$28,521,000	$28,973,192	—1.6
Products, total value[2]	$56,454,000	$56,006,225	0.8
Envelopes	$54,851,000	(3)	..
Other products	$1,185,000	(3)	..
Amount received for contract work	$418,000	(3)	..
Value added by manufacture:[4]			
Total	$27,933,000	$27,033,033	3.3
Per wage earner	$2,892	$2,774	4.3
Ratio (per cent) of cost of materials, etc., to value of products	50.5	51.7	..

[1] Not including salaried employees. The average number of wage earners is based on the numbers reported for the several months of the year. This average somewhat exceeds the number that would have been required for the work performed if all had been continuously employed throughout the year, because of the fact that manufacturers report the numbers employed on or about the 15th day of each month, as shown by the pay rolls, usually taking no account of the possibility that some or all of the wage earners may have been on part time or for some other reason may not actually have worked the entire week. Thus in some cases the number reported for a given month exceeds the average for that month.

[2] Manufacturers' profits can not be calculated from the census figures because no data are collected for certain expense items, such as interest on investment, rent, depreciation, taxes, insurance, and advertising.

[3] Not reported separately.

[4] Value of products less cost of materials, fuel, and purchased electric current.

State Compensation Awards to Workers

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., September 20, 1930.—During the first half of the year the State Department of Labor made compensation awards in 109,848 cases where the workers were injured or killed while employed. The cases were distributed as follows: Death cases, 1,308; permanent total disabilities 40; permanent partial disabilities, 22,394; temporary disabilities, 86,106. Final compensation awards for these industrial accidents amounted to over thirty-five million dollars. About half that amount was for permanent injuries while one-fourth was for temporary injuries. The balance is the estimated amount that will be paid to the dependents of workers who were killed. There were 9,386 more closed cases than in the preceding years and the greatest proportionate increase was in schedule awards, made in permanent partial disabilities.

Rhinelander Paper Co. To Build Wood Room

RHINELANDER, Wis., September 15, 1930.—The Rhinelander Paper Company again is spending a considerable amount of money to keep its mill up to maximum efficiency. A contract has recently been awarded to C. R. Meyer & Sons Company, of Oshkosh, Wis., for the erection of an entirely new wood room, at a cost of approximately $150,000. This new unit is to be equipped with the last word in wood room equipment so as to afford very economical operation with the least possible number of men.

LOCKWOOD'S DIRECTORY

OF THE PAPER AND ALLIED TRADES

1930 EDITION

CORRECTED UP-TO-DATE

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Classified List of Pulp Mill Products
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Envelope Manufacturers
Glazed and Coated Paper Manufacturers
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LAWRENCE MASSACHUSETTS

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING SEPTEMBER 20, 1930

SUMMARY

Cigarette paper	327 cs.
Wall paper	6 bls., 28 cs.
Paper hangings	2 bls., 2 cs.
News print	5260 rolls
Printing paper	42 rolls, 293 cs.
Wrapping paper	46 bls., 134 cs.
Filter paper	26 cs.
Drawing paper	34 cs.
Decalcomania paper	22 cs.
Photo paper	14 rolls
Baryta coated paper	130 crates, 28 cs.
Metal paper	21 cs.
Surface coated paper	18 cs.
Writing paper	15 cs.
Cover paper	4 cs.
Litmus paper	1 cs.
Miscellaneous paper	59 pkgs., 84 bls., 56 cs.

CIGARETTE PAPER

Le Manduit Paper Corp., Collamer, Havre, 89 cs.
Standard Products Corp., Paris, Havre, 97 cs.
P. J. Schweitzer, Pr. Van Buren, Marseilles, 141 cs.

WALL PAPER

W. H. S. Lloyd & Co., Rotterdam, Rotterdam, 3 cs.
——, Rotterdam, Rotterdam, 6 cs.
J. E. Bernard & Co., Belgenland, Antwerp, 1 cs.
F. J. Emmerich, A. Ballin, Hamburg, 6 cs.
Irving Trust Co., A. Ballin, Hamburg, 6 cs.
A. L. Diament & Co., Majestic, Southampton, 3 cs.
Globe Shipping Co., Reliance, Hamburg, 4 bls
Bendix Paper Co., Reliance, Hamburg, 9 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnekhda, London, 2 bls., 2 cs.

NEWS PRINT

Perkins Goodwin & Co., A. Ballin, Hamburg. 188 rolls; Cleveland, Hamburg, 470 rolls.
Scripps Howard Supply Co., Drottningholm, Gothenburg, 264 rolls.
Stora Kopperberg Corp., Drottningholm, Gothenburg, 50 rolls.
——, Bergensfjord, Oslo, 112 rolls.
W. H. Bell, Markland, Liverpool, N. S., 4,236 rolls.

PRINTING PAPER

E. Dietzgen & Co., Rotterdam, Rotterdam, 32 cs.
D. F. Young, Berlin, Bremen, 66 cs.
Winsor Newton, Lancastria, London, 3 cs.
Keller Dorian Paper Co., Majestic, Southampton, 5 cs.
Meadows Wye & Co., American Merchant, London, 3 cs.
T. N. Fairbanks Co., Paris, Havre, 27 cs.
Keller Dorian Paper Co., Paris, Havre, 2 cs.
Continental Typefounders Ass'n, Reliance, Hamburg, 5 cs.
Keuffel & Esser Co., America, Hamburg, 42 rolls.
Japan Paper Co., Saturnia, Trieste, 71 cs.
T. N. Fairbanks Co., Saturnia, Trieste, 79 cs.

WRAPPING PAPER

Steffens Jones Co., Belgenland, Antwerp, 3 cs.
Sylvania Industrial Corp., Belgenland, Antwerp, 131 cs.
M. M. Cohen, Cleveland, Hamburg, 24 bls.
J. P. Heffernan Paper Co., Drottningholm, Gothenburg, 11 bls.
T. Barrett & Son, Drottningholm, Gothenburg, 11 bls.

FILTER PAPER

S. Schleicher Schull Co., A. Ballin, Hamburg, 16 cs.
H. Reeve Angel & Co., Inc., Lancastria, London, 10 cs.

DRAWING PAPER

J. Henschel Co., Reliance, Hamburg, 1 cs.; A. Ballin, Hamburg, 2 cs.
F. C. Strype, Belgenland, Antwerp, 1 cs.
American Express Co., Lafayette, Havre, 1 cs.
H. Reeve Angel & Co., Inc., Lancastria, London, 1 cs.
Artists Brush & Color Corp., Minnekahda, London, 1 cs.
Devoe & Reynolds Co., Paris, Havre, 1 cs.
Keuffel & Esser Co., America, Hamburg, 26 cs.

DECALCOMANIA PAPER

G. W. Sellers, A. Ballin, Hamburg, 6 cs.
Phoenix Shipping Co., Europa, Bremen, 1 cs.
B. F. Drakenfeld & Co., Laconia, Liverpool, 15 cs. (duplex)

PHOTO PAPER

C. Brunning Co., Inc., Rotterdam, Rotterdam, 14 rolls.

BARYTA COATED PAPER

J. H. Schroeder Banking Corp., Columbus, Bremen, 80 crates, 1 cs.; Berlin, Bremen, 50 crates, 2 cs.
Globe Shipping Co., Berlin, Bremen, 25 cs.

METAL PAPER

K. Pauli Corp., Berlin, Bremen, 16 cs.; A. Ballin, Hamburg, 2 cs.
R. W. Greef Co., A. Ballin, Hamburg, 3 cs.

SURFACE COATED PAPER

Gevaert Co. of America, Belgenland, Antwerp, 17 cs.
Quality Art Novelty Co., Reliance, Hamburg, 1 cs.

WRITING PAPER

B. Altman & Co., Lafayette, Havre, 3 cs.
Robert Enterprise, Inc., Paris, Havre, 1 cs.
Distinctive Writing Paper Co., Paris, Havre, 4 cs.; Mauretania, Southampton, 1 cs.
Globe Shipping Co., Mauretania, Southampton, 6 cs.

COVER PAPER

International F'd'g Co., A. Ballin, Hamurg, 4 cs.

LITMUS PAPER

Pfalz & Bauer, Inc., Portland Maru, Hamburg, 1 cs.

MISCELLANEOUS PAPER

Heemsoth Basse & Co., Rotterdam, Rotterdam, 84 bls.
Keuffel & Esser Co., Rotterdam, Rotterdam, 10 cs.
Hensel Bruckman & Lorbacher, Berlin, Bremen, 3 cs.
American Express Co., A. Ballin, Hamburg, 59 pkgs.
Titan Shipping Co., A. Ballin, Hamburg, 2 cs.
Globe Shipping Co., American Shipper, London, 5 cs.
Coenca Morrison Co., Paris, Havre, 2 cs.
Japan Paper Co., Paris, Havre, 3 cs.
——, Pr. Van Buren, Genoa, 29 cs.
Tamm & Co., Saturnia, Trieste, 2 cs.

RAGS, BAGGING, ETC.

E. J. Keller Co., Inc., Rotterdam, ——, 9 bls. rags.
Darmstadt Scott & Courtney, Rotterdam, Rotterdam, 40 bls. bagging.
C. R. Spence, Transylvania, Glasgow, 44 bls. rags.
Guaranty Trust Co., Eberstein, Antwerp, 217 bls. rags.
E. Butterworth & Co., Inc., Eberstein, Antwerp, 188 bls. flax waste.
Guaranty Trust Co., Exilona, Leghorn, 31 bls. rags.
Liberty National Bank, Exilona, Genoa, 84 bls. rags.
Banco Com'l Italiane Trust Co., Exilona, Genoa, 187 bls. bagging.
V. Galaup, Collamer, Havre, 35 bls. rags
1st National Bank of Boston, Collamer, Dunkirk, 89 bls. rags.
D. M. Hicks, Inc., Collamer, Dunkirk, 36 bls. paste.
E. Mayer, American Merchant, Hamburg, 61 bls. rags.
Irving Trust Co., American Merchant, Hamburg, 13 bls. threads.
S. Birkenstein & Son, London Corporation, London, 142 bls. paper stock.
Castle & Overton, Inc., London Corporation, London, 66 bls. rags; Morro Castle, Havana, 22 bls. rags.
S. Birkenstein & Son, Estrella, Valencia, 247 bls. rags.
E. J. Keller Co., Inc., St. Andre, ——, 82 bls. new cuttings; Innoko, ——, 68 bls. rags.

CASEIN

Passaic Nat'l Bank & Trust Co., Majestic, Southampton, 80 bags.

CHINA CLAY

English China Clays Sales Corp., Tynebridge, Fowey, 1304 tons, 7 cwt.
Paper Makers Import Co., Tynebridge, Fowey, 1072 tons, 19 cwt.
Moore & Munger, Tynebridge, Fowey, 633 tons, 5 cwt.
J. Dixon Crucible Co., Reliance, Hamburg, 400 bags.

WOOD PULP

Bulkley Dunton & Co., Berlin, ——, 125 bls. wood pulp.
Castle & Overton, Inc., Cleveland, Hamburg, 554 bls. wood pulp, 83 tons.
E. M. Sergeant & Co., Drottningholm, Gothenburg, 500 bls. wood pulp; 200 bls. sulphite; 748 bls. kraft soda pulp.
M. Gottesman & Co., Inc., Drottningholm, Gothenburg, 900 bls. sulphite.
Perkins, Goodwin & Co., Drottningholm, Gothenburg, 127 bls. kraft pulp.
Price & Pierce, Ltd., Drottningholm, Gothenburg, 250 bls. wood pulp.
Scandinavian Pulp Agency, Inc., Lagaholm, Wifstavarf, 250 bls. sulphite.
Perkins Goodwin & Co., Lagaholm, Wifstavarf, 250 bls. sulphite; 850 bls. sulphate.
Parsons & Whittemore, Inc., Lagaholm, Wifstavarf, 150 bls. wood pulp.
Johanson Wales & Sparre, Inc., Lagaholm, Wifstavarf, 180 bls. sulphite.
——, Laghalm, Gothenburg, 300 bls. wood pulp.
M. Gottesman & Co., Inc., Lagaholm, Stockholm, 900 bls. sulphite.
Chemical Bank & Trust Co., Bergensfjord, Oslo, 175 bls. sulphite.
Johanson Wales & Sparre, Inc., Bergensfjord, Amotfors, 210 bls. sulphate.
——, Bergensfjord, Oslo, 2000 bls. wood pulp.
Harriman Bros. Co., Portland Maru, Hamburg, 240 bls. wood pulp.
——, Portland Maru, Hamburg, 278 bls. sulphate, 55 tons.
Johanson Wales & Sparre, Inc., Amer. Merchant, Hamburg, 502 bls. wood pulp, 76 tons.
——, Reliance, Hamburg, 130 bls. wood pulp, 26 tons.

WOOD FLOUR

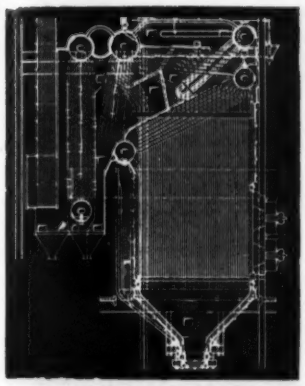
F. W. Schmaltz, Rotterdam, Rotterdam, 200 bags.
State Chemical Co., City of Alton, Rotterdam, 550 bags, 34280 ks.

BOSTON IMPORTS

WEEK ENDING SEPTEMBER 29, 1930

J. Andersen & Co., Lagaholm, Gothenburg, 2175 bls. sulphite.
E. M. Sergeant & Co., Lagaholm, Gothenburg, 240 bls. kraft soda pulp.
Johanson Wales & Sparre, Inc., Lagaholm, Gothenburg, 120 bls. dry soda pulp.
Perkins Goodwin & Co., Lagaholm, Gothenburg, 5499 bls. kraft pulp; 1270 bls. sulphite.
The Borregaard Co., Inc., Lagaholm, Gothenburg, 625 bls. wood pulp.
G. F. Malcolm, Laconia, Liverpool, 25 cs. tissue paper.
F. S. Webster, Laconia, Liverpool, 10 cs. tissue paper.

(Continued on page 68)



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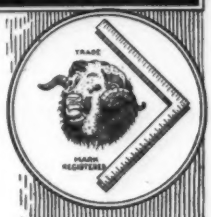

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Los Angeles Pittsburgh Tulsa

ALL KELLOGG FORGE AND HAMMER LAP WELDED PRODUCTS ARE INSURABLE

Imports of Paper and Paper Stock

(Continued from page 66)

International Purchasing Co., Exilona, Genoa, 227 coils old rope.
Atterbury Bros., Inc., West Selene, B. Ayres, 834 bags casein, 50040 ks.
1st Natl Bank of Boston, West Selene, B. Ayres, 834 bags casein, 50040 ks.; Castilian Prince, B. Ayres, 417 bags casein, 25040 ks.
Brown Bros. & Co., Castilian Prince, B. Ayres, 500 bags casein, 30000 ks.
Atkinson Haserick Co., Pr. Van Buren, Genoa, 1 cs. paper.

BALTIMORE IMPORTS

WEEK ENDING SEPTEMBER 29, 1930

Congoleum Nairn Co., Exchester, Bari, 293 bls. rags.
Guaranty Trust Co., St. Andre, Havre, 234 bls. rags.

PHILADELPHIA IMPORTS

WEEK ENDING SEPTEMBER 29, 1930

——, Exchester, Alexandria, 172 bls. rags.
——, Exchester, Algiers, 69 bls. rags.
J. A. Steer & Co., Exilona, Marseilles, 161 bls. rags.
S. Birkenstein & Son, Exilona, Marseilles, 53 coils old rope.
D. I. Murphy, Collamer, Havre, 207 bls. rags.
Union Waste Co., Collamer, Havre, 20 bls. rags.
Guaranty Trust Co., Collamer, Havre, 177 bls. rags.
J. A. Steer & Co., Collamer, Havre, 139 bls. rags.
Castle & Overton, Inc., Collamer, Havre, 335 bls. rags.
Robert Blank, Collamer, Havre, 80 bls. rags.
Lang Co., Collamer, Havre, 461 bls. rags.
Leiphiemer Missimir & Co., Collamer, Havre, 3 bls. rags.
Katzenstein & Keene, Inc., Collamer, Havre, 59 bls. rags.
Brown Bros. & Co., Collamer, Havre, 144 bls. rags.
Strawbridge & Clothier, Collamer, Havre, 3 cs. writing paper.
Katzenstein & Keene, Inc., Collamer, Dunkirk, 278 bls. rags.
D. I. Murphy, Collamer, Dunkirk, 43 bls. rags.
Barings Bros. & Co., London Corporation, London, 70 coils old rope.
G. M. Graves Co., London Corporation, London, 97 coils old rope.
Lang Co., London Corporation, London, 170 pkgs. paper stock.
International Trust Co., London Corporation, London, 86 coils old rope.
Bank of New York, St. Andre, Havre, 46 bls. rags.
Guaranty Trust Co., St. Andre, Havre, 12 bls. new cuttings.
E. J. Keller Co., Inc., Estrella, ——, 239 bls. rags; Quaker City, ——, 25 bls. rags.

PORTLAND, ME., IMPORTS

WEEK ENDING SEPTEMBER 29, 1930

Johanson Wales & Sparre, Inc., Lagaholm, Wifstavarf, 250 bls. sulphite.
Waterfalls Papermills Co., Lagaholm, Gothenburg, 6000 bls. wood pulp.
English China Clays Sales Corp., Tynebridge, Fowey, 1682 tons, 14 cwt. china clay; 1817 bags china clay, 186 tons.
Paper Makers Import Co., Tynebridge, Fowey, 60 casks china clay, 30 tons; 425 tons, 17 cwt. china clay.
Moore & Munger, Tynebridge, Fowey, 1318 tons, 11 cwt. china clay.

HOUSTON IMPORTS

WEEK ENDING SEPTEMBER 29, 1930

——, Lutzow, Hamburg, 1262 bls. rags.

Improved Paper Demand in Indianapolis

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., September 22, 1930—A distinct improvement in the paper trade here has been noted in the past week. Not only has the industrial complexion of the local trade area shown a fairer hue, but schools and colleges have opened and the demand for fine papers from the stationers also has shown a big improvement. Demand for papers for direct advertising campaigns is improving also the news print situation is showing the results of fall season business resumption.

In the more common grades of paper the business improvement also is noted, except for strictly summer novelties, such as napkins, table cloths, paper plates and cups. Demand for glassines is good and shows improvement, both on the part of former users and in the number of new uses being found for such stock. Wrapping paper also shows a little improvement and when the fall sales get sufficiently under way this demand is expected to improve further.

Naturally the building paper situation virtually is dormant. The year has been a continuous disappointment to dealers in these grades. Even boosted by perfect fall construction weather the volume just isn't in the cards. It is felt, however, by manufacturers' representatives that the demand on the factories will pick up during the winter. Because of extremely close buying on the part of the dealers, stocks in dealers' hands are very low and it is thought they will augment these before the first of the year, or immediately after.

Simplification of Grocers' Bags

The proposed revision of simplified practice recommendation on Grocers' Bags has been sent to the manufacturers, distributors and users of this product for their consideration and written acceptance, according to an announcement made by the Division of Simplified Practice of the Bureau of Standards, Department of Commerce.

Among the most important changes made in the revised recommendation are the insertion of a column assigning definite minimum basic weights of paper, and the selection of an additional emblem (SSW), Standard Size and Weight, as the recognized imprint for all bags conforming to the size and weight standards.

The Standard Size emblem (S) will continue to be in use when bags conform to size only.

This simplification, if approved by the industry, will be effective October 1, 1930.

Eastman Kodak Orders Large Paper Making Machine

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., September 20, 1930—The Bagley & Sewall Company has just received an order to turn out a large paper making machine for the Eastman Kodak Company, of Rochester, which will be ready for shipment late in the Fall. The Rochester concern uses a large amount of paper annually and in the past has purchased thousands of tons of various grades under contract with paper companies. The company has decided, however, to produce its own paper materials and the new machine is to be installed in a plant recently fitted up for that purpose. The machine will be built to supply great speed in conforming with the grade of paper to be manufactured besides being devised to make the finest quality of that particular grade.

Plans call for the delivery of the machine before the end of the year and it was announced that construction would be started at once. It was learned that the contract had been awarded to the Bagley & Sewall Company because of its fine reputation in handling similar contracts for various concerns in all sections of the country. It is understood that the new machine will have a width of over one hundred inches and will be of the most modern kind of mill equipment.

The Rochester concern uses considerable fine paper of varying weights and shades in the making of pictures from negatives. In the past few years considerable tonnage of duplex paper has been purchased under contract for the covering of roll films to protect them from light while a large amount of high grade paper has also been used in the packing of film packs and plates. In addition the firm uses much sized book paper for folders and catalogues and fine grade print papers for the printing of formulae and notices. It was not stated just what grade of paper the new machine would be used for when it is ready for operation.

Swedish Wood Pulp Market Dull

WASHINGTON, D. C., September 24, 1930.—The usual dullness was experienced in the Swedish wood pulp market during the month of August according to reports received here. Contracts for 1931 delivery of both strong sulphate and strong sulphite are being entered, and small amounts for delivery during the current year are also being disposed of, chiefly in 50 and 150 ton lots.

A few sales for 300 tons for this year's delivery have been made to North American buyers. Prices are unchanged. The quotations to North American buyers are around $2.30 to $2.40 per 100 pounds for strong sulphite and $1.75 to $1.80 per 100 pounds for best quality strong sulphate.

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Complete Plants, Design, Supervision, and Reports.

Continental Industrial Engineers Inc.
201 North Wells St. Chicago, Ills.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, September 24, 1930.

Trading in the local paper market continued to show signs of improvement during the past week. Shipments of the various standard grades of paper are going forward in fairly satisfactory volume for the time of year. Sales forces of the leading paper organizations are booking some good orders and are mostly optimistic. Prices are generally holding to formerly quoted levels.

Production of news print in Canada and the United States is being maintained in sufficient volume to take care of current requirements. The contract movement is well up to average. There have been no changes in the price situation but as a result of recent large mergers the future outlook is more encouraging than for some time past.

The paper board market is practically unchanged. Demand is fairly active but the price situation remains unsatisfactory. Fine paper supplies are moving in good volume and the market is steady. Tissues are in seasonal request. The coarse paper market is irregular, although demand for wrapping paper is gradually picking up.

Mechanical Pulp

Steadiness prevails in the ground wood market. Offerings of both domestic and imported mechanical pulp are ample, although there are no excessive accumulations. Shipments against contract are going forward in normal volume for the season. Prices are generally holding to schedule without difficulty and there is little talk of concessions around.

Chemical Pulp

The chemical pulp market was rather quiet during the past week. Demand for practically all imported and domestic grades was restricted to small orders for immediate requirements. However, it is reported that some good orders for 1931 delivery have been booked lately. Prices are generally holding to formerly quoted levels, although competition is keen.

Old Rope and Bagging

Paper mill interest in the old rope market appears to be improving. Both foreign and domestic old manila rope are in better request and small mixed rope is moving in fair volume. Prices are generally steady and unchanged. The position of the bagging market is practically unchanged. Both scrap and gunny are fairly active. Prices are well maintained.

Rags

The rag market was only moderately active during the past week. Demand for cotton cuttings was mostly along routine lines. Roofing stock was in light request. Mixed rags are moving into consumption in fair volume. No radical price changes were recorded. The imported rag market continues dull, with prices abroad still considered too high by local brokers.

Waste Paper

Some improvement was noticed in the paper stock market. The lower grades of waste paper are apparently arousing more interest from the board mills. Offerings are said to be limited and consequently prices are steadier than of late. The better grades of paper stock are displaying strength. Soft white savings and hard white envelope cuttings are steady to firm.

Twine

Conditions in the twine market are fairly satisfactory. Supplies are moving into consumption in good volume and inquiries for future needs are fairly numerous. The outlook for the next few months is promising. Although competition for desirable orders is very keen, prices are generally being maintained at former levels, and shading is infrequent.

Forest Products Association to Convene

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., September 20, 1930—It was announced this week that the annual convention of the Empire State Forest Products Association will be held in this city on October 9 and 10. The business session of the members will be held in the afternoon at the Black River Valley Club with George W. Sisson, president of the Racquette River Paper Company, presiding. Mr. Sisson will deliver his annual report as will also the other executives of the organization. Other business to be taken up will include the reports of various committees and the election of officers.

An informal dinner will be held at the Black River Valley Club in the evening when illustrated motion pictures of logging and milling operations will be shown instead of the customary program of addresses by prominent men. The program for the final day includes an inspection of the forest plantation of the St. Regis Paper Company and the visit will be under the supervision of J. E. Kieb, forester for that concern. The St. Regis Paper Company plans to act in the capacity as host to the delegation and an invitation to attend the convention has been issued to families and friends of members of the organization. A visit to the power projects along the Beaver River will also be made.

To Dismantle Sulphite Plant at Floriston

RENO, Nev., September 20, 1930.—The Crown-Willamette Paper Company plans to dismantle its sulphite plant at Floriston, Nevada County, Cal. This is according to the advices received by Attorney-General M. A. Diskin from the San Francisco office of the corporation. It is understood the company plans to suspend all operations at Floriston and to remove the plant to the state of Washington.

By a stipulation signed last year, the corporation is bound to dismantle its plant by October 1, 1931, or to prevent the escape of sulphite liquors into the Truckee River.

The State of Nevada filed an injunction suit several years ago to prohibit the pollution of the river by the Floriston mill.

To Locate Coating Department in Lawrence

LAWRENCE, Mass., September 22, 1930—Negotiations are underway for the transfer of the paper coating department of the Forbes Lithographic Company of Chelsea to the Merrimack Paper Company of this city. Although the deal has not yet been completed, an official of the local company said that the expected action would be taken within the next few days.

The paper will be handled for the Chelsea firm by the same machinery, methods and formulae as heretofore, the change being made to enlarge the finishing work facilities of the Chelsea plant.

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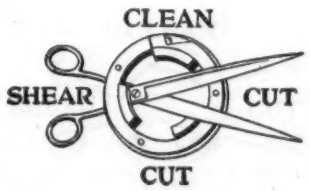

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SAMUEL M. LANGSTON CO.
Camden, N. J.

SLITTERS

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, September 24, 1930.

BLANC FIXE.—Trading in the blanc fixe market was moderately active. The contract movement was well up to average. Prices are steady. The pulp is quoted at from $42.50 to $45.00 per ton, in bulk, while the powder is selling at from 3¾ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—Some improvement was noticed in the bleaching powder market. Shipments against contract are going forward at a normal pace for the season. Prices generally remain unchanged. Bleaching powder is quoted at from $2.00 to $2.35 per 100 pounds, in drums, at works.

CASEIN.—Weakness developed in the casein market and prices were easier. Domestic standard ground is quoted at 12½ cents and finely ground at 15 cents per pound. Argentine standard ground is selling at 13½ cents and finely ground at 14½ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Demand for caustic soda is improving slightly. Contract shipments are moving in good volume. Prices remain unchanged. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Steadiness prevails in the china clay market. Supplies are going forward to the mills at a steady pace. Prices remain unchanged. Imported china clay is quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—The position of the chlorine market is practically unchanged. Shipments against contract are proceeding at a normal pace. Prices remain unaltered. Chlorine is quoted at from $2.40 to $2.45 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—Conditions in the rosin market are improving. Prices are firmer. The grades of gum rosin used in the paper mills are quoted at from $6.20 to $6.25 per 280 pounds, in barrels, at yard. Wood rosin is selling at $4.10 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Production of salt cake is being maintained in sufficient volume to take care of current requirements. Demand is moderately active. Salt cake is still quoted at from $22 to $25 per ton, while chrome salt cake is selling at from $20 to $21 per ton, in bulk, at works.

SODA ASH.—Most of the business transacted in the soda ash market during the past week was along routine lines. The contract movement is fairly heavy. Contract quotations on soda ash, in car lots, at works, are as follows: in bags, $1.32½, and in barrels, $1.55 per 100 pounds.

STARCH.—The starch market is displaying a steady trend. Shipments against contract are proceeding at a good pace for the season. Prices are holding to previously quoted levels. Special paper making starch is quoted at $3.77, in bags, and at $4.04 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—Paper mill interest in the sulphate of alumina market is fairly satisfactory. Prices are generally holding to schedule, without difficulty. Commercial grades are quoted at from $1.40 to $1.55, and iron free at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—The sulphur market is exhibiting a strong undertone. Sulphur is quoted at $18 per ton, at mine, on orders of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and nearby car loads the quotation is $21 per ton.

TALC.—Demand for talc is fairly persistent. Supplies are going forward to the paper mills in normal volume. Prices remain unchanged. Domestic talc is quoted at from $16 to $18 per ton, in bulk, while imported talc is selling at from $18 to $20 per ton, in bags, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@	38.00
Bonds	9.00	@	53.25
Writings—			
Extra Superfine	14.00	@	32.00
Superfine	14.00	@	32.00
Tub sized	10.00	@	15.00
Engine sized	8.00	@	11.00
Book, Cased—			
S. & S. C.	6.00	@	7.50
M. F.	5.75	@	7.00
Coated and Enamel	7.50	@	12.00
Lithograph	7.50	@	12.00
Tissues—Per Ream—			
White No. 1	.75	@	1.00
Anti-Tarnish	1.35	@	1.90
Colored	1.00	@	2.00
White No. 2	.75	@	.80
Kraft	1.00	@	1.10
Manila	.75	@	.80
Kraft—			
No. 1 Domestic	5.75	@	6.25
No. 2 Domestic	3.75	@	5.00
Southern	3.50	@	4.50
Imported	6.50	@	7.00
Manila—			
No. 1 Jute	9.00	@	9.25
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.75	@	5.25
No. 2 Wood	4.00	@	4.50
Butchers	3.75	@	4.25
Fibre Papers—			
No. 1 Fibre	5.00	@	5.50
No. 2 Fibre	4.75	@	5.25
Common Bogus	2.75	@	3.00
Screenings	3.00	@	3.25
Card Middles	4.00	@	5.00
Glassine—			
Bleached, basis 25 lbs.	13.00	@	16.00
Bleached, basis 20 lbs.	15.00	@	16.00

(Delivered New York)

News, per ton—			
Rolls, contract	62.00	@	—
Rolls, spot	62.00	@	—
Sheets	67.00	@	—
Side Runs	47.00	@	52.00
Boards—per ton—			
News	30.00	@	—
Straw	44.00	@	—
Chip	27.50	@	—
Binders' Boards	65.00	@	70.00
100 Test Jute Liner	37.50	@	40.00
85 Test Jute Liner	47.50	@	50.00
Sgl. Mla. Ll. Chip	42.50	@	45.00
Wood Pulp Boards	75.00	@	80.00

(F. o. b. Mill)

Mechanical Pulp

(On Dock)

No. 1 Imported—			
Moist	28.00	@	30.00
Dry	30.00	@	32.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@	30.00

Chemical Pulp

(On Dock, Atlantic Ports)

Sulphite (Imported)—			
Bleached	3.00	@	4.25
Easy Bleaching	2.60	@	2.80
No. 1 strong unbleached	2.30	@	2.65
Mitscherlich unbleached	2.40	@	2.85
No. 2 strong unbleached	2.20	@	2.35
No. 1 Kraft	1.65	@	2.15
No. 2 Kraft	1.55	@	1.65
Sulphate—			
Bleached	3.40	@	3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—			
Bleached	2.65	@	4.75
Easy Bleaching Sulphite	2.55	@	2.75
News Sulphite	2.35	@	2.60
Mitscherlich	2.75	@	3.25
Kraft (Domestic)	2.10	@	3.30
Soda Bleached	2.90	@	3.20

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	8.75	@	9.25
New White, No. 2	7.25	@	7.75
Silesias No. 1	6.75	@	7.00
New Unbleached	9.50	@	10.00
New Blue Prints	5.25	@	5.50
New Soft Blacks	4.50	@	5.00
Blue Overall	6.75	@	7.25
Washables	4.25	@	4.75
Fancy	4.75	@	5.25
Mixed Khaki Cuttings	4.75	@	5.25
Pink Corset Cuttings	8.00	@	8.50
O. D. Khaki Cuttings	5.15	@	5.75
Men's Corduroy	3.75	@	4.25
New Mixed Blacks	3.50	@	3.75

Old Rags

White, No. 1—			
Repacked	5.50	@	6.00
Miscellaneous	4.50	@	5.00
White, No. 2—			
Repacked	3.00	@	3.50
Miscellaneous	2.50	@	2.75
St. Soiled, White	2.00	@	2.15
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	2.00
Black Stockings	3.25	@	3.75
Roofing Rags—			
Cloth Strippings	1.50	@	1.60
No. 1	1.50	@	1.60
No. 2	1.15	@	1.25
No. 3	1.10	@	1.20
No. 4	1.00	@	1.10
No. 5A	.90	@	1.05

Foreign Rags

New Rags

New Dark Cuttings	2.50	@	3.00
New Mixed Cuttings	2.25	@	2.75
New Light Silesias	6.75	@	7.00
Light Flannelettes	6.75	@	7.25
Unbleached Cuttings	9.00	@	9.50
New White Cuttings	9.00	@	9.50
New Light Oxfords	7.00	@	7.50
New Light Prints	5.00	@	5.50

Old Rags

No. 1 White Linens	7.25	@	8.00
No. 2 White Linens	5.75	@	6.75
No. 3 White Linens	4.75	@	5.25
No. 4 White Linens	3.00	@	3.50
No. 1 White Cotton	5.50	@	6.25
No. 2 White Cotton	4.50	@	5.00
No. 3 White Cotton	3.00	@	4.00
No. 4 White Cotton	1.75	@	2.10
Extra Light Prints	2.75	@	3.00
Ord. Light Prints	2.15	@	2.40
Med. Light Prints	1.80	@	2.00
Dutch Blue Cottons	2.15	@	2.30
French Blue Linens	2.65	@	2.75
German Blue Linens	2.30	@	2.50
German Blue Cottons	1.90	@	2.00
Checks and Blues	1.75	@	1.90
Lindsay Garments	1.30	@	1.40
Dark Cottons	1.00	@	1.10
Old Shopperies	.90	@	1.00
New Shopperies	.95	@	1.05
French Blues	1.95	@	2.05

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—			
Foreign	1.65	@	1.75
Domestic	1.65	@	1.75
Wool Tares, light	1.40	@	1.50
Wool Tares, Heavy	1.40	@	1.50
Bright Bagging	1.35	@	1.45
Small Mixed Rope	1.15	@	1.25
Manila Rope—			
Foreign	3.00	@	3.10
Domestic	3.50	@	3.75
New Burlap Cut	2.25	@	2.50
Hessian Jute Threads—			
Foreign	3.50	@	4.00
Domestic	3.25	@	3.50

Old Waste Papers

(F. o. b. New York)

Shavings—			
Hard, white, No. 1	3.00	@	3.25
Hard, white, No. 2	2.40	@	2.55
Soft, white, No. 1	2.80	@	2.90
White envelope cuttings	2.90	@	3.10
Flat Stock—			
Stitchless	1.30	@	1.40
Overissue Mag.	1.30	@	1.40
Solid Flat Book	1.20	@	1.30
Crumpled No. 1	.90	@	1.00
Solid Book Ledger	2.00	@	2.10
Ledger Stock	1.30	@	1.40
New B. B. Chips	.35	@	.45
Manilas—			
New Env. Cut.	2.40	@	2.60
New Cuttings	1.50	@	1.75
Extra No. 1 old	1.25	@	1.35
Print	.60	@	.65
Bogus Wrapper	.60	@	.65
Container	.40	@	.50
Old Kraft Machine—			
Compressed bales	1.45	@	1.55
News—			
No. 1 White News	1.77	@	1.87
Strictly Overissue	.50	@	.55
Strictly Folded	.35	@	.40
No. 1 Mixed Paper	.25	@	.30
Common Paper	.15	@	.20

West Virginia Pulp and Paper Company

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Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrappings, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¼
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	5.00	@	5.50
Southern Kraft	3.75	@	4.00
No. 2 Kraft	3.75	@	4.00
Wood Tag Boards	.04¼	@	.06½
Sulphite Sreenings	.03	@	.03¾
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	42.50
Solid News	47.50	@	—
Solid News	40.00	@	45.00
Manila Lined Chip	50.00	@	55.00
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.35	@	2.40
White Env. Cut			
No. 1 Soft Shavings	2.10	@	2.15
No. 1 Mixed	.30	@	.35
No. 2 Mixed	.25	@	.35
Ledger & Writings	1.25	@	1.35
Solid Books	1.05	@	1.10
Blanks	1.60	@	1.65
Krafts	1.30	@	1.40
New Kraft Cuts	1.50	@	1.70
Manila Envelope Cuttings	1.65	@	1.70
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.45	@	.50
Folded News (over-issue	.40	@	.45
Old Newspapers—			
No. 1	.35	@	.40
No. 2	.30	@	.35
Mixed Papers—			
No. 1	.30	@	.35
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.05	@	.40
Ledgers	.08	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.09	@	.20
Book, M. F.	.05	@	.07
Book, S. S. & C.	.05	@	.07½
Book, Coated	.09	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.07	@	.09
Manila Sul., No. 1	.03½	@	.05½
Manila No. 2	.03	@	.04
No. 1 Kraft	.05¾	@	.06¾
No. 2 Kraft	.03¾	@	.04¼
Southern Kraft No. 1	—	@	.03¾
Southern Kraft No. 2	—	@	.03½
Common Bogus	.03¼	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	70.00
News Board	37.50	@	38.50
Chip Board	32.50	@	35.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Black Soft	.05	@	.05¼
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.65	@	2.75
No. 2 Hard White	2.30	@	2.50
No. 1 Soft White	2.25	@	2.50
No. 2 Soft White	1.40	@	1.60
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.60	@	.70
Solid Ledger Stock	1.55	@	1.65
Writing Paper	1.05	@	1.25
No. 1 Books, heavy	1.00	@	1.20
No. 2 Books, light	.90	@	1.00
No. 1 New Manila	2.15	@	2.30
No. 1 Old Manila	1.50	@	1.60
Print Manila	.50	@	.60
Container Manila	.45	@	.50
Old Kraft	1.35	@	1.40
Common Paper	.25	@	.35
No. 1 Mixed Paper	.25	@	.30
Straw Board, Chip	.35	@	.40
Binders Board, Chip	.35	@	.45
Corrugated Board	.50	@	.60
Overissue News	.45	@	.50
Old Newspaper	.25	@	.30

Domestic Rags (Old)

White No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
M. G.	6.00	@	—
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.25	@	1.30
Repacked	.80	@	.90
No. 2	.70	@	.75
No. 3 (Roofing)	.30	@	.40
No. 4	.30	@	.40
No. 5A	.70	@	.75
B	.40	@	.60
C	.25	@	.30

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.12½
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.04¾	@	.06
No. 2 Kraft	.03¾	@	.05
(Less car-freight to Boston)			
Southern Kraft	.03¾	@	.04¼
(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots.)			
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls	.009		52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	32.50	@	—
Chip Board	30.00	@	—
Chip Board (Special)	32.50	@	—
Single Manila Lined Chip	45.00	@	—
Single White, Patent Coated Newsboard Bender	65.00	@	80.00
Wood Pulp Board	75.00	@	80.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.50	@	2.60
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	—	@	2.25
No. 1 Books, Heavy	1.00	@	—
No. 1 Books, Light	.85	@	—
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	.90	@	1.00
White Blank News	1.50	@	1.60
Old Kraft	1.35	@	1.45
Print Manila	.75	@	.80
No. 1 Mixed Paper	.20	@	.25
Overissue News	.45	@	.50
Old Newspapers	.37½	@	.40
Box Board, Chip	.50	@	.55
Corrugated Boxes	—	@	.45

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.65
Domestic	1.50	@	—
Manila Rope—			
Foreign	3.00	@	3.25
Domestic	—	@	3.50
Transmission Rope	2.35	@	2.50
Mixed Strings	.90	@	1.00
Jute Wool Strings	.90	@	1.00
Jute Carpet Threads	1.00	@	1.10
Scrap Burlaps	1.25	@	1.40
Scrap Sisal	1.50	@	1.65
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	1.60	@	—
New Burlap Cutting	1.75	@	2.00
Australian Wool Pouches	2.25	@	3.00

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.08	@	.08½
New White No. 2	—	@	.06
Silesias No. 1	.06	@	.06¼
New Unbleached	—	@	.09¼
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¼
Khaki Cuttings	.04	@	.04¼
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	1.90
Black Stockings	—	@	4.00
Roofing Stock—			
No. 1	1.25	@	1.50
No. 2	.90	@	1.00
No. 3	.85	@	.90
No. 4	.75	@	.85

Foreign Rags
(F. o. b. Boston)

Dark Cottons	.95	@	1.00
New No. 1 Shirt Cuttings	8.50	@	9.00
Dutch Blues	2.25	@	2.50
Lace Curtains	4.50	@	4.75
New Checks & Blues	4.25	@	4.60
Old Fustians	1.90	@	2.00
Old Linsey Garments	1.20	@	—

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	10.00	@	11.50
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.00	@	—
No. 1 Manila	5.40	@	—
Fiber	5.40	@	—
Kraft, M. F.	5.90	@	—

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

Ground Wood	30.00	@	32.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	60.00	@	—
Sulphite, bleached	72.50	@	75.00
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writ-			
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.85	@	—
Strictly Folded	.85	@	—
No. 1 Mixed Paper	.65	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.09½	@	.10

Advertising matter paged consecutively with text, has been removed here to lessen the bulk of this volume.

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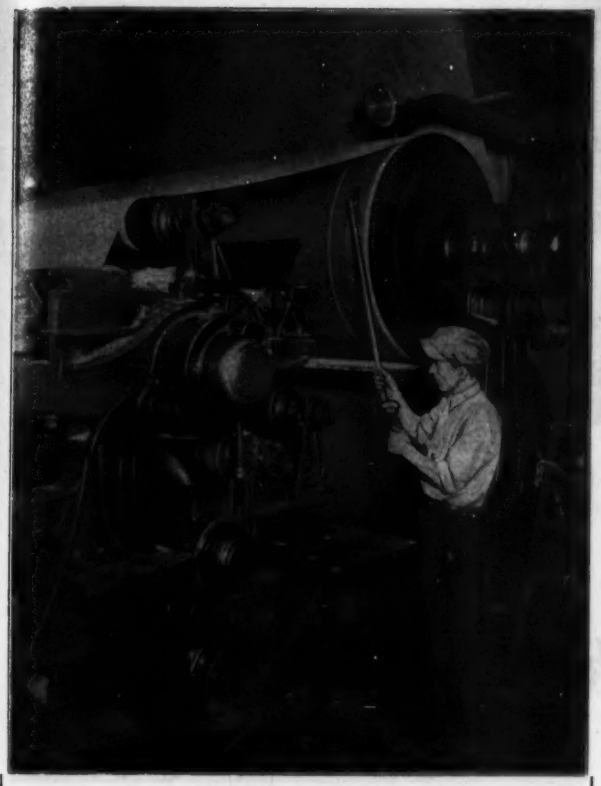

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ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-NINTH YEAR

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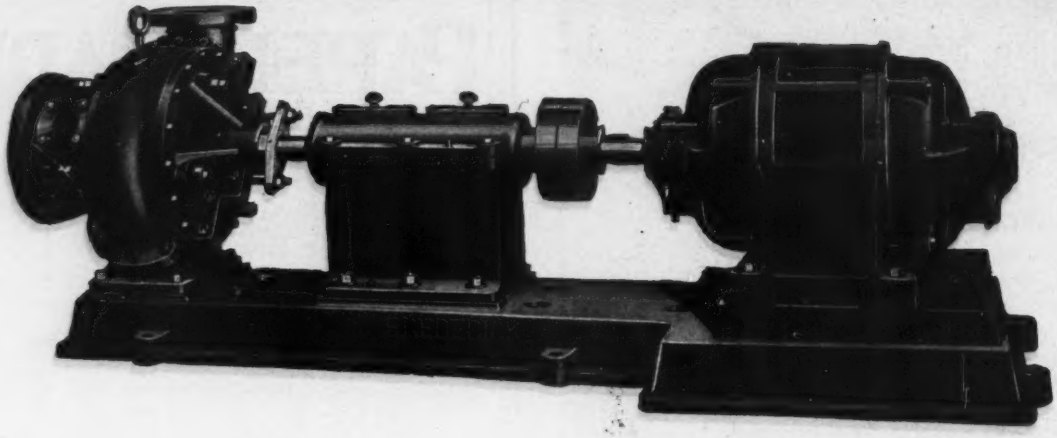

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